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BEFORE THE  
ILLINOIS COMMERCE COMMISSION  
COMMONWEALTH EDISON COMPANY :  
: Docket No. 12-0484  
PETITION FOR APPROVAL OF :  
TARIFFS IMPLEMENTING COMED'S :  
PROPOSED PEAK TIME REBATE :  
PROGRAM :

Chicago, Illinois  
December 7, 2012

Met, pursuant to adjournment, at 9:00 o'clock a.m.

BEFORE:  
Leslie Haynes, Administrative Law Judge

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1 JUDGE HAYNES: Let's go on the record.

2 Pursuant to the direction of the Illinois  
3 Commerce Commission, I now call Docket 12-0484. This  
4 is the petition of Commonwealth Edison  
5 Company for approval of tariffs implementing ComEd's  
6 proposed peak time rebate.

7 May I have appearances for the record,  
8 please.

9 MR. FOSCO: Your Honor, appearing on  
10 behalf of Commonwealth Edison Company Carmen Fosco,  
11 Susan Rubner, and John Rooney, with Rooney Rippie &  
12 Ratnaswamy, LLP, 350 West Hubbard Street, Suite 600,  
13 Chicago, Illinois 60604.

14 MR. BERNSTEIN: Also appearing on behalf of  
15 Commonwealth Edison Company, Mr. Eugene Bernstein with  
16 Exelon Business Services, 10 South Dearborn, Chicago,  
17 Illinois.

18 MR. FEELEY: Representing staff of the  
19 Illinois Commerce Commission, John Feeley and  
20 Angelique Palmer, Office of General Counsel, 160 North  
21 LaSalle Street, Suite C800, Chicago, Illinois 60601.

22 MR. GIORDANO: For Converge, Inc.,

1 Patrick Giordano and Blake Baron of the Law Firm of  
2 Giordano & Associates, Ltd., 35 East Wacker Street,  
3 Suite 1525, Chicago, Illinois.

4 MR. GHOSHEL: On behalf of the Citizens  
5 Utility Board, Orijit Ghoshel, G-h-o-s-h-a-l, and  
6 Kristin Munsch, M-u-n-s-c-h, 309 West Washington Street,  
7 Suite 800, Chicago, Illinois 60606.

8 MR. JOLLY: Appearing on behalf of the City  
9 of Chicago, Ronald D. Jolly, 30 North LaSalle, Suite  
10 1400, Chicago, Illinois 60602.

11 JUDGE HAYNES: Are there any further  
12 appearances? Let the record reflect there are none.

13 We're here today for the evidentiary  
14 hearing, and I understand that Comverge is going to put  
15 on their witness first.

16 MR. GIORDANO: Thank you, your Honor. This  
17 is Dr. Wendell Miyaji.

18 Dr. Miyaji, I show you what we've marked as  
19 Comverge Exhibits 2.0, 2.1 and 2.2, and ask you if that  
20 testimony was prepared by you or under your supervision?

21 DR. MIYAJI: Yes.

22 JUDGE HAYNES: Before -- I'm sorry. Before

1 going further, I think we need to spell the last name,  
2 for the record and then we'll swear you in.

3 Can you spell your last name?

4 THE WITNESS: M-i-y-a-j-i.

5 JUDGE HAYNES: Can you please raise your  
6 right hand.

7 Do you solemnly swear to tell the truth, the  
8 whole truth, and nothing but the truth?

9 THE WITNESS: Yes.

10 JUDGE HAYNES: Thank you.

11 MR. GIORDANO: Dr. Miyaji, I show you  
12 Comverge Exhibits 2.0, 2.1 and 2.2, and ask you if those  
13 exhibits were prepared by you or under your supervision?

14 THE WITNESS: Yes.

15 MR. GIORDANO: If I were to ask you the same  
16 questions in those -- in that testimony today, would  
17 your answers be the same?

18 THE WITNESS: Yes.

19 MR. GIORDANO: I submit Comverge Exhibits  
20 2.1, 2.2 and -- 2.0, 2.1, and 2.2, for the record and  
21 subject to cross examination.

22 JUDGE HAYNES: Were these exhibits filed on

1 eDocket?

2 MR. GIORDANO: Yes.

3 JUDGE HAYNES: Is there any objection to  
4 entering Comverge Exhibits 2.0, 2.1, and 2.2 into the  
5 record?

6 MR. FOSCO: Your Honor, Carmen Fosco on  
7 behalf of ComEd. We'd ask that you reserve ruling until  
8 cross examination because we do believe there may be an  
9 issue.

10 JUDGE HAYNES: That's fine.

11 MR. FOSCO: Mr. Miyaji, I'm not sure if you  
12 want to rearrange or not --

13 MR. GIORDANO: Carmen, can you please refer  
14 to him as Dr. Miyaji?

15 MR. FOSCO: Yes. I'm sorry.

16 MR. GIORDANO: Thank you.

17 CROSS EXAMINATION

18 BY MR. FOSCO:

19 Q. Good morning, Dr. Miyaji.

20 A. Good morning.

21 Q. My name is Carmen Fosco. I'm one of the  
22 attorneys representing Commonwealth Edison Company and I

1 have some questions for you this morning.

2                   You testified that the propose of your  
3 testimony is to provide a survey of peak load reduction  
4 through certain demand response programs that utilize  
5 enabling direct load control technology which I'll refer  
6 to as DLC, such as programmable communicating  
7 thermostats, also known as PCTs, and direct control  
8 units known as PCUs to reduce peak electricity demand,  
9 correct?

10                   MR. GIORDANO: Carmen, can you give him a  
11 reference, please, to his testimony?

12                   MR. FOSCO: I can.

13 BY MR. FOSCO:

14           Q. Page one, line 20 to 23.

15           A. Yes.

16           Q. Is it your testimony that DLCs consist of PCUs  
17 and PCTs?

18           A. These are the peak --

19           Q. Are the most common types of --

20                   JUDGE HAYNES: JUDGE HAYNES reporter is not  
21 hearing you. I think you need to bring your mic closer  
22 or --



1 THE WITNESS: Is that better?

2 JUDGE HAYNES: Yes.

3 BY MR. FOSCO:

4 Q. I'm sorry. Can you repeat the answer, I'm sorry.

5 Did you answer yes?

6 A. Yes.

7 Q. You focus in your testimony about information  
8 about Comverge administered residential demand response  
9 programs and other utility residential demand response  
10 programs utilizing direct load control technology,  
11 correct?

12 A. Yes.

13 Q. You conclude that a 40-percent peak demand  
14 reduction from enabling direct load control technology  
15 is the assumption that should be used in this  
16 proceeding, evaluating a direct load control equipment  
17 component of a peak time relief program?

18 A. Yes.

19 Q. Are the terms of demand and load generally  
20 interchangeable?

21 A. As to -- I haven't thought of it that way.

22 Q. Would you explain what demand refers to?

1           A. Demand refers to the power requirement to satisfy  
2 the electrical need at the time.

3                   JUDGE HAYNES: Can --

4                   MR. GIORDANO: I think it's just awkward the  
5 way the witness is sitting and it's not his fault.

6                   JUDGE HAYNES: Let's go off the record for a  
7 second.

8                   (Off the record.)

9                   MR. FOSCO: Can you read back the last  
10 question and answer?

11                   (Record read.)

12 BY MR. FOSCO:

13           Q. That's at a single instance in time, correct?

14           A. Yes.

15           Q. It's not over a period of time?

16           A. Well, it has to be -- it's measured over some  
17 period of time.

18           Q. When we refer to peak demand, you're referring to  
19 the highest demand that -- in time, is that correct?

20           A. Yes.

21           Q. Do you agree that peak demand can be thought of  
22 as either maximum instantaneous demand at an instance in

1 time or the maximum average demand over a designated  
2 period of time?

3 A. It's referred to as both.

4 Q. It can be both. They do refer to different  
5 numbers, though, correct, or they measure different --  
6 that would measure different demands, is that correct?

7 A. Yes.

8 Q. And they would only be the same if the  
9 instantaneous demand was constant over a given period of  
10 time, is that correct?

11 A. Correct.

12 Q. In your testimony you mentioned the words peak  
13 period load -- I'm sorry, I don't have a reference. I  
14 think it's on page one or two. Is that the load or  
15 demand over a given period of time?

16 A. Yes. It has to be measured over some period of  
17 time.

18 Q. When you refer to various peak load -- well,  
19 let's go back. I think you defined demand. How does  
20 load differ from demand, if it does?

21 A. I guess probably it doesn't make much difference.

22 Q. When you refer to peak load or peak demand drop

1 in your testimony, are those numbers with respect to the  
2 instantaneous peak load drop?

3 A. Not instantaneous.

4 Q. What period of time are the figures in your  
5 testimony referring to?

6 A. Sometimes they're one hour, sometimes they're  
7 15 minutes. Sometimes -- some of them are over several  
8 hours and they average different timings.

9 Q. I'm sorry. Were you finished?

10 A. Different of our programs --

11 Q. Could you refer to your Exhibit 2.2?

12 A. Sure.

13 Q. Referring to the 2008, the column labeled 2008  
14 peak kilowatt reduction or Converge utility program one  
15 which is the second column down, there's an amount of  
16 1.64. Do you see that?

17 A. Yes.

18 Q. What period of time is that measured over?

19 A. 15 minutes.

20 Q. Would all of these numbers here be over 15  
21 minutes or are any different?

22 A. Yes, some of them are different.

1 Q. Can you identify the first one which is  
2 different?

3 A. All those in line two are different.

4 Q. By line two, do you mean for program two?

5 A. Yes.

6 Q. What period of time are those numbers -- what  
7 period of time do those peak load drops represent?

8 A. Line two on program two, the measurements are  
9 averaged over many hours depending on how many events  
10 that were that season.

11 Q. Taking the 2008 column, how many hours?

12 A. I don't remember exactly.

13 Q. Where would you look to find that information?

14 A. In a program report for that program.

15 Q. A measurement verification sitting?

16 A. Yes.

17 Q. The same for 2009, do you know how many hours  
18 that was measured for?

19 A. No.

20 Q. Mr. Miyaji, did you respond or I'm sorry, Dr.

21 Miyaji, did you respond or were you responsible for

22 responding to or generating the responses for any data

1 request from ComEd in this proceeding?

2 MR. GIORDANO: Objection. That's not an  
3 appropriate question.

4 MR. FOSCO: He can tell me if he did  
5 anything or not.

6 JUDGE HAYNES: Overruled.

7 THE WITNESS: I was responsible for -- for  
8 everything.

9 JUDGE HAYNES: How about the specific data  
10 request, is that what you're talking about?

11 MR. FOSCO: Your Honor, may I approach the  
12 witness?

13 JUDGE HAYNES: Yes.

14 (ComEd Cross Exhibit 1 marked  
15 for identification.)

16 BY MR. FOSCO:

17 Q. Dr. Miyaji, I've handed you a document that's  
18 been marked for identification as ComEd Cross Exhibit 1.  
19 This is a response from Converge to ComEd, Converge Data  
20 Request 2.14. Have you seen this document before?

21 A. Yes.

22 Q. Is this one of the data request responses that

1     you provided?

2           A.    Yes.

3           Q.    In this response, we asked for information on the  
4     six-hour average load reduction for the numbers that  
5     were contained on page four of your testimony which  
6     summarized the numbers contained in Exhibit 2.2,  
7     correct?

8           A.    Correct.

9           Q.    You indicated or this response indicates that  
10    Comverge does not have the average load information?

11          A.    There's a couple of things here.  One is these  
12    programs have never done a contiguous six hours  
13    reduction.  Secondly, we don't collect data on each  
14    individual customer, it's done on a sample basis where  
15    we measure for statistical samples of the individual  
16    participants.  So there might be 100,000 participants in  
17    the program and we would make measurements for about a  
18    hundred of them and those would be -- those hundred  
19    would be then averaged and that's how we estimate the  
20    load reduction for the program.

21          Q.    So you would average the information for those  
22    one hundred customers, is that correct?

1       A. One hundred is an example, right, for the sample.

2       Q. For the sample. And you have hourly load data  
3 for those -- for the sample, is that correct?

4       A. Yes.

5       Q. So you could have provided -- why did you not  
6 provide, then, information for the sample for the  
7 aggregate as to the average six-hour load?

8       A. Well, there's -- we don't have -- we didn't  
9 curtail for six hours in this instance so there wouldn't  
10 be six hours. But we didn't provide it because the data  
11 is confidential to the utility.

12       Q. How many hours are referring to utility program  
13 number two, how many hours were the curtailment periods  
14 for each year?

15       A. For each year or for each data?

16       Q. Well --

17       A. The curtailments --

18       Q. Let's go to each event?

19       A. For each event, one hour to four hours.

20       Q. Do you know how many for 2009? I mean how many  
21 events, how many hours?

22       A. I don't remember.



1 Q. The same thing for 2008, how many events, how  
2 many hours?

3 A. I don't remember.

4 Q. Would the same be true for 2009, '10, and '11?

5 A. Yes.

6 Q. Were none of the events for six hours?

7 A. Correct.

8 Q. We were going over which programs differed in  
9 terms of the measurement period and you identified  
10 utility program two. Were program three and four 15  
11 minute interval data or were they different?

12 A. The program four uses five 15-minute periods.

13 Q. So your peak demands only represent the  
14 instantaneous peak load reached for the programs one,  
15 three, and four over a 15-minute period, is that  
16 correct?

17 A. I would consider instantaneous to be a much  
18 shorter period of time.

19 Q. Even within that 15-minute period you're only  
20 measuring the instantaneous peak?

21 A. No, in the 15 minutes we're averaging and it's an  
22 average of 15 minutes.

1       Q. But that's the interval that your numbers  
2 represent, is only for that 15 minutes, so it's the  
3 highest load that's the average load over that 15-minute  
4 period?

5               MR. GIORDANO: Objection. Clarify which  
6 program you're referring to.

7               MR. FOSCO: Well, he's I believe grouped  
8 programs one, three, and four together. Let me re-ask  
9 the question.

10 BY MR. FOSCO:

11       Q. Is it your testimony that for programs one,  
12 three, and four and all of the data presented in your  
13 Comverge Exhibit 2.2 represents the average load drop,  
14 the maximum peak load drop over a 15-minute period?

15       A. No. I said that program four was an average of  
16 five 15-minute periods.

17       Q. Each period only -- but then each period, as you  
18 just stated, would be limited to 15 minutes, correct, if  
19 each of the periods were no longer than 15 minutes?

20       A. Correct. They could be contiguous.

21       Q. I'm sorry. They could be what?

22       A. The 15-minute periods could be sequential, right

1 after five 50 minutes that are sequential would be --

2 Q. In using a direct control unit where you cycle an  
3 air-conditioner, is a typical cycle 15 minutes or  
4 longer?

5 A. Well, what happens is that when we do it, we use  
6 an algorithm that randomizes the start times in a cycle  
7 period so that not all the -- are held off at the same  
8 time so that gives us a smooth curtailment as opposed to  
9 adding -- that's not what we do. We average so it's  
10 flat across and we get the different ones started at  
11 different times.

12 Q. What is the time period measured for program  
13 three?

14 A. That's 15 minutes.

15 JUDGE HAYNES: I'm going to jump and make  
16 sure I'm not confused. So what you're saying is you  
17 collect your data in 15-minute increments, but the  
18 actual curtailment lasts longer than 15 minutes?

19 THE WITNESS: Well, we actually collect our  
20 data in five minute intervals to measure energy comply  
21 data. We average those five-minute measurements to get  
22 a 15-minute average, and in the example in program two,

1 we then average for an entire hour and then we average  
2 multiple hours. And in one and three we took a  
3 15-minute measurement and in number four we averaged  
4 five 15-minute periods.

5 JUDGE HAYNES: And so these numbers are all  
6 -- are 15 minutes productions?

7 THE WITNESS: Not in program two. They're  
8 the average of all the events throughout the season.

9 JUDGE HAYNES: Okay. So the rest of them  
10 are averaged over the whole season?

11 THE WITNESS: Pardon me?

12 JUDGE HAYNES: The rest of them are averaged  
13 over the whole season?

14 THE WITNESS: No. The rest of them are  
15 intended to find a peak value for that -- requirements.  
16 No, one and three are 15 minute data, one 15-minute  
17 value.

18 JUDGE HAYNES: Okay.

19 BY MR. FOSCO:

20 Q. Dr. Miyaji, the program that ComEd proposes to  
21 bid capacity into for the peak time rebate program at  
22 issue here involves average load over -- up to a

1 six-hour period, isn't that correct?

2 A. It could.

3 Q. Average load reduction. I'm sorry.

4 A. I thought, though, that's never been experienced  
5 for that program.

6 Q. Isn't that a PJM requirement for bidding in  
7 capacity based on the --

8 MR. GIORDANO: Objection. This is beyond  
9 the scope of Dr. Miyaji's testimony. This is -- Mr.  
10 Lacey has testified regarding the PJM bidding  
11 requirements.

12 MR. FOSCO: Your Honor, this witness is  
13 putting in testimony trying to establish that the  
14 numbers that he is presenting are reasonable to use  
15 here. We're entitled to explore whether this witness  
16 knows the purpose for which his numbers are going to be  
17 put, and if he doesn't I think that's relevant.

18 MR. GIORDANO: The --

19 JUDGE HAYNES: I think he can answer the  
20 question.

21 MR. FOSCO: If he doesn't know, he doesn't  
22 know.

1 JUDGE HAYNES: I think that was going to be  
2 the answer, but maybe -- do you know what the PJM,  
3 whatever the question is.

4 BY MR. FOSCO:

5 Q. Do you know if the PJM program that ComEd has  
6 proposed to bid the peak time rebate resources into are  
7 required that it be based on the six-hour average of  
8 peak load?

9 A. No.

10 Q. And the numbers you presented would not present  
11 comparable data to an average peak load drop load up to  
12 a six-hour period, is that correct?

13 A. Not this particular table.

14 Q. Let's talk a little bit about peak load drop.  
15 What are the main factors that determine how much peak  
16 load drop is achieved with direct load control?

17 A. The main factors are the amount of  
18 air-conditioning used for that time period, the  
19 algorithm that is used to control the units, and the  
20 ability to communicate those units.

21 Q. When you refer to the air-conditioning used,  
22 would you agree that's related to either the size of the

1 house or the size of the air-conditioners for each  
2 participant?

3 A. It's related to the size of the air-conditioner  
4 for that set point of the house and --

5 Q. I'm sorry. I think you -- were you referring to  
6 the control structure? I think you mentioned some  
7 aspects how the load is controlled, is that your second  
8 item?

9 A. Yes.

10 Q. What does that refer to?

11 A. Well, different -- there's numerous ways that are  
12 done in the industry to control air-conditioning levels.  
13 The simplest way is to just cycle the air-conditioner on  
14 and off in a fixed period, so it's on for 15 minutes,  
15 off for 15 minutes. Sometimes the thermostats we will  
16 raise the set point of a thermostat to a higher  
17 temperature, for instance if it was set to -- the  
18 thermostat was 72 degrees, we might change that to 75  
19 degrees and that would turn off the air-conditioner for  
20 some period of time. We also use algorithms where we  
21 look at the runtime of the air-conditioner prior to the  
22 event and reduce that runtime to something significantly

1 less. That method ensures that every air-conditioner  
2 participates in some load reduction.

3 Q. When you refer to the ability to communicate,  
4 you're referring to the switch or the programable  
5 communicating thermostat to actually operated when  
6 needed, is that correct?

7 A. Yes.

8 Q. Would you also agree that the size of the peak  
9 load of the individual participants and the participants  
10 as a group as well as how much peak load reduction is  
11 issued?

12 A. Yes.

13 Q. Would you also agree that the temperatures  
14 experienced during the peak loads are a factor in how  
15 much peak load reduction can be issued with direct  
16 control -- direct load control equipment?

17 A. Yes.

18 Q. In many of these programs using direct load  
19 control participants are able to opt out with individual  
20 events by pressing a button on the equipment, is that  
21 true?

22 A. That's not true in any of our programs.



1 Q. So a customer doesn't -- in none of your programs  
2 the customers don't have the option of not participating  
3 in an event?

4 A. No, that's not true either.

5 Q. How do they not -- how do customers -- let's  
6 refer to the four programs in your Exhibit 2.2.

7 A. They call the call center and opt out of the  
8 program.

9 Q. But there's -- none of those programs do the  
10 equipment have a feature that allowed the customer to  
11 merely press a button or do something with the equipment  
12 to opt out?

13 A. There's no such feature.

14 Q. But customers could opt out, correct?

15 MR. GIORDANO: Objection, asked and  
16 answered.

17 MR. FOSCO: Let me ask another question.

18 BY MR. FOSCO:

19 Q. Is that a factor in how much peak load drop is  
20 achieved, the number of customers that opt out of a  
21 particular event?

22 A. That's a factor, but it relates to some -- is

1 very small.

2 Q. What is the -- in general, what is the range of  
3 achievable -- strike that. How much of a residential  
4 customer's peak load is generally attributable to  
5 air-conditioning units?

6 A. I guess it depends on the time of year, but it  
7 can be significantly more than half certain times and  
8 sometimes less or sometimes not --

9 Q. On average, can you say how much it would  
10 represent on average? Would 50 percent be fair on  
11 average if it's during the summer season?

12 A. Fifty percent what?

13 MR. GIORDANO: Objection. You need to  
14 clarify where. In ComEd or in the country? What's the  
15 territory you're asking about?

16 BY MR. FOSCO:

17 Q. Let me ask you this. Does it make a difference  
18 where in the country you're located as to how much peak  
19 load is attributable to air-conditioning?

20 A. Yes.

21 Q. In an area of the southern part of the United  
22 States there would be more peak load attributable to

1 air-conditioning, isn't that correct, in general?

2 A. In general.

3 Q. What's the maximum amount of peak load, in your  
4 opinion, that you've seen for air-conditioning from a  
5 residential customer? When you said it was  
6 significantly about 50 percent, what number did you  
7 mean?

8 A. It's hard for me to answer this generally because  
9 I don't see a lot of whole house meter data.

10 Q. Is that what the sample that you referred to  
11 earlier, is the whole house meter data?

12 A. No. That sample is the measurement of the  
13 air-conditioning --

14 Q. Have you studied the amount of peak load  
15 attributable to air-conditioning in the ComEd service  
16 territory?

17 A. We've never made measurement in ComEd territory.

18 Q. Would you expect it to be less than 50 percent of  
19 the ComEd service territory, the amount of peak load,  
20 total peak load attributable to air-conditioning for  
21 residential customers?

22 A. I think -- in peak summer periods I think it

1 would be more than 50 percent.

2 JUDGE HAYNES: I didn't hear that.

3 THE WITNESS: I said in summer periods,  
4 summer peak periods, I'd expect it to be more than 50  
5 percent.

6 BY MR. FOSCO:

7 Q. How much more?

8 A. Maybe it would be two-thirds.

9 Q. And when you say that, do you have in mind a  
10 particular type of house or are you saying on average?

11 A. Yeah, I'm saying on average.

12 Q. In the direct load control equipment that  
13 Comverge is proposing that the commission require to be  
14 part of this peak time rebate program, the equipment is  
15 to control air-conditioning load, isn't that correct?

16 A. Yes.

17 Q. In general -- in general where a direct, either a  
18 DC direct control unit or a programable communicating  
19 thermostat is used, how much of the load attributable to  
20 air-conditioning use can be reduced over a six-hour  
21 period by using direct flow control technology?

22 A. Well, if you chose to, you could do all of it.

1       Q. That would be totally just shutting off the  
2       air-conditioner?

3       A. Yes.

4       Q. Would you agree that it's more common to cycle  
5       the air-conditioner?

6       A. Yes.

7       Q. When you're using cycling -- well, let's back up.  
8       In your testimony, in fact, you refer to cycling the  
9       air-conditioner, did you not?

10      A. Yes.

11      Q. And when you are cycling an air-conditioner using  
12      direct load control technology, what's the average  
13      amount of that load that can be reduced by using that  
14      type of equipment?

15      A. Well, they typically do it at using like 50 or 60  
16      percent adaptive, and this is where we're measuring the  
17      air-conditioning usage in the time period before  
18      starting the event and then we reduce the amount of  
19      air-conditioning usage by -- that is allowed to run by  
20      that percentage. As an example, if it was running 40  
21      minutes in the prior hour, we might allow it to run 20  
22      minutes in the subsequent hours and that would -- that's

1     what we refer to as a 50-percent reduction. That  
2     ensures that every air-conditioner makes a contribution  
3     as opposed to straight cycling, whereby it just turns it  
4     off for a fixed period. And some of the other data,  
5     they just do a straight cycling period so that the  
6     air-conditioner that was only running 30 percent of the  
7     time in the prior hour would continue to run 30 percent  
8     of the time -- 30 minutes all the time in subsequent  
9     hours because they're just turning it on for 15 minutes,  
10    off for 15 minutes, and then the air-conditioner runs in  
11    the other 15 minutes so they get no reduction. But in  
12    the -- we've been using, we reduce the amount so it  
13    ensures that it gets a significant reduction from  
14    participants using air-conditioners. Does that help?

15       Q. Yes. So applying the discussion we just had to  
16    -- well, let's back up. You acknowledged in your  
17    testimony that the average peak load for ComEd  
18    residential customers is 2.25 kilowatts, is that  
19    correct?

20       A. You got that from some ComEd --

21       Q. You don't have any information that would suggest  
22    that it's some different number, do you?

1       A.   No.

2       Q.   If we apply your two-thirds of the peak load  
3   being attributable to air-conditioning, that would  
4   roughly equate to 1.5 kilowatts attributable to  
5   air-conditioning use of the average peak load for a  
6   ComEd residential customer?

7       A.   Yes.

8       Q.   Then if we apply the 50-percent cycling reduction  
9   to that amount of air-conditioning load, that would take  
10   us to roughly .75 kilowatts load reduction?

11      A.   That's true.  But if you needed to get more, you  
12   would do it at --

13      Q.   All the factors that we just discussed or what  
14   affects the amount of load drop that's achievable, did  
15   you look at each of those factors for each of the  
16   programs that you provided testimony about?

17      A.   In what way?

18      Q.   Did you analyze -- did you analyze that data in  
19   any way?

20               MR. GIORDANO:  Objection.  It's not  
21   specific.  What factors are you referring to?  You said  
22   the factors we've discussed.

1 BY MR. FOSCO:

2 Q. In coming to a conclusion as to your  
3 recommendation in this docket, did you look at each of  
4 the factors that we just discussed as to how much load  
5 drop is achievable for the programs that you looked at?

6 MR. GIORDANO: Objection, that's not  
7 specific. What factors he just discussed? You've been  
8 cross-examining him for half an hour. I don't know what  
9 -- there's no way we know what you're referring to.

10 BY MR. FOSCO:

11 Q. The air conditioning used the control technology,  
12 the communications of -- the ability to communicate the  
13 temperature, the switch operability, those factors, did  
14 you look at any of those factors for the programs that  
15 you identified in your testimony?

16 A. We look at them for our programs all the time.  
17 We look at the factors, these factors for our programs  
18 all the time.

19 Q. Did you compare those factors in the areas where  
20 you had programs and compared them to the same factors  
21 in the ComEd service territory to see if they were  
22 comparable or different?



1           A.  We don't have measurements for ComEd areas.

2           Q.  That's a no?

3           A.  No.

4           Q.  In fact, we asked for work papers and you  
5 provided no work papers in this docket, isn't that  
6 correct?

7           A.  Yes.

8           Q.  So you didn't even compile data for the other  
9 programs that you refer to regarding those factors,  
10 correct?  You made no specific analysis just for the  
11 work papers --

12                   MR. GIORDANO:  Objection.  There was a  
13 pending question, now you've asked another question.  
14 What is the question?  You just asked two questions.

15           BY MR. FOSCO:

16           Q.  You made no effort to compile data regarding the  
17 factors which we have just discussed in the last  
18 question in preparing your testimony here, is that  
19 correct?

20                   MR. GIORDANO:  Objection.  I'm still  
21 confused, what you're referring to.

22                   MR. FOSCO:  I'm just -- I think it's fairly

1 clear. I think we can talk about factors. If I have to  
2 go and repeat that every time, I can do that, but we'll  
3 be here a lot longer.

4 THE WITNESS: So you --

5 MR. GIORDANO: Can you answer the question?  
6 Do you understand it?

7 THE WITNESS: I think the question was that  
8 do you look at the temperatures of these program areas  
9 and measurements of the program areas --

10 BY MR. FOSCO:

11 Q. That was not the question. The question is did  
12 you look -- did you gather data to see what the average  
13 area household size or air-conditioning usage was in  
14 each of the studies you referenced in your testimony?  
15 Did you pull that together in preparing your testimony  
16 here?

17 A. Not for this testimony, no.

18 Q. Can you tell us the average size of each of -- of  
19 a residential home for the data looked at for each of  
20 the programs identified in ComEd Exhibit 2.2 -- Converge  
21 Exhibit 2.2?

22 A. The average size of the home? No.

1       Q. Can you tell us the average size of the  
2       air-conditioner?

3       A. I have that, but I don't remember that.

4       Q. Again where is that at?

5       A. That's the customer data.

6       Q. I mean, how do you know -- would that be in the  
7       measurement and verification studies?

8       A. Sometimes; not all the time.

9       Q. Do you have the average event opt-out rate for  
10      customers in each of the programs you identified in  
11      Comverge Exhibit 2.2?

12      A. For some of them.

13      Q. What are they?

14      A. I can tell you rating. I can't tell you the  
15      exact number of each one of them for each hour.

16      Q. You can't associate any of them to the specific  
17      numbers in your testimony?

18      A. I don't remember them, no.

19      Q. For whatever period the curtailments were in the  
20      programs that you cited, are you able to tell us the  
21      average peak load drop over the entire curtailment  
22      periods for each of those programs, whether it was one

1 hour or two hours?

2 MR. GIORDANO: Objection. I believe this  
3 was asked and answered.

4 JUDGE HAYNES: Overruled.

5 THE WITNESS: No.

6 BY MR. FOSCO:

7 Q. Referring to the 1.85 kilowatt peak load  
8 reduction value that you identify in your testimony,  
9 you're familiar with that?

10 MR. GIORDANO: Which one? There's a lot of  
11 numbers in his testimony. What are you referring to?

12 MR. FOSCO: Program one for 2010.

13 JUDGE HAYNES: In the exhibit you're talking  
14 about?

15 THE WITNESS: Program one for 2010, okay.

16 MR. GIORDANO: Exhibit 2.2, correct?

17 MR. FOSCO: Right.

18 BY MR. FOSCO:

19 Q. That number, you're familiar with that number,  
20 correct?

21 A. Yes.

22 Q. That's the only number that was 1.185 percent in

1 your testimony, correct, there was no other program?

2 A. 1.185.

3 MR. GIORDANO: Objection. It's not a  
4 percentage. It's a --

5 MR. FOSCO: Peak load.

6 MR. GIORDANO: It's a peak load number, KW.

7 BY MR. FOSCO:

8 Q. In your testimony you refer to a peak load  
9 reduction of 1.84 kilowatts, correct?

10 JUDGE HAYNES: What page?

11 MR. FOSCO: Page six -- strike that. I'm  
12 sorry. I'm referring to page five, line six.

13 BY MR. FOSCO:

14 Q. Do you see the reference there to 1.85 kilowatts?

15 A. One point -- on line six. Yes.

16 Q. Is that a typo? Should that be 1.18?

17 A. I think that is programmed through 2009.

18 Q. Okay, thank you. Referring to that program,  
19 you're familiar with that peak load drop in kilowatts,  
20 correct?

21 A. Yes.

22 Q. You relied upon that number in making your

1 recommendation as to what the commission should consider  
2 an appropriate peak load reduction in this docket,  
3 correct?

4 A. Well, I use that, but I was looking at the lower  
5 bounds of the numbers as opposed to the highest.

6 Q. Would you agree that that particular number is  
7 not particularly instructive for the ComEd service  
8 territory?

9 A. 1.185, yes.

10 Q. 1.85?

11 A. 1.85, yes.

12 Q. What is the lowest average load drop for  
13 participant experienced for a Converge administered  
14 demand response program, to your knowledge?

15 A. Lowest for a 50-minute period?

16 Q. Yes.

17 A. I don't remember exactly, but maybe a half.

18 Q. Half a kilowatt?

19 A. Yes.

20 Q. You also refer in your testimony to a study by  
21 Dr. Arrequi.

22 A. Yes.

1           Q. Is it correct that you produced a copy of that  
2 study in response to ComEd Converge data request 2.24?

3           A. Yes.

4                   MR. FOSCO: Your Honor, may I approach the  
5 witness?

6                   JUDGE HAYNES: Yes.

7                   MR. FOSCO: For the record, your Honor, I'm  
8 going to mark this as ComEd Cross Exhibit 2.

9                           (ComEd Cross Exhibit 2 marked  
10 for identification.)

11                   MR. GIORDANO: Is this already part of Mr.  
12 Eber's testimony in this case?

13                   MR. FOSCO: It may be, but this is a copy  
14 from what you produced.

15 BY MR. FOSCO:

16           Q. Dr. Miyaji, have you had a chance to briefly  
17 review this page?

18           A. Yes.

19           Q. Do you recognize this as one of the pages of the  
20 study that you identified in your testimony?

21           A. Yes.

22           Q. This particular page has various blocks of

1 information. The first one on the left at the top it  
2 says TOU. Can you explain to us what that stands for?

3 A. That's time of use. That means that there are  
4 different time periods where the price of electricity to  
5 the end user differs.

6 Q. Then the second block says TOU technology, so  
7 that means that those were programs in that block that  
8 were based on time of use pricing mechanism using  
9 technology equipment, direct control equipment?

10 A. Yes.

11 Q. And the same thing, the next box is PTR. Would  
12 you agree that stands for peak time rebate?

13 A. Yes.

14 Q. Those numbers, since they're no indication of  
15 what technology, those are without technology, correct?

16 A. Yes.

17 Q. The next two columns both indicate CPP. Does  
18 that stand for, critical peak pricing?

19 A. Yes.

20 Q. Again that's another sort of price responsive,  
21 demand response program, is that correct?

22 A. That's correct.



1 Q. Based on peak pricing methods. And again the box  
2 that's says with technology, again those are programs  
3 that included direct load control technology, correct?

4 A. That's correct.

5 Q. The last two columns are labeled RTP and that  
6 stands for realtime pricing, correct?

7 A. Yes.

8 Q. And again those are ones with and ones without  
9 technology?

10 A. Yes.

11 Q. You relied on studies that were in the critical  
12 peak pricing blocks with technology, is that correct,  
13 the studies identified in your testimony?

14 A. Yes.

15 Q. Would you agree that a number of these studies  
16 that were -- programs, I'm sorry, that were reviewed in  
17 Dr. Faruqui's study achieved peak load drops in the  
18 10- to 20-percent range?

19 A. Yes.

20 Q. So it is --

21 MR. GIORDANO: Were you done?

22 BY MR. FOSCO:

1 Q. Were you finished, Dr. Miyaji?

2 JUDGE HAYNES: I guess I'm not clear of your  
3 question where it refers to CPPs with technology and  
4 without technology.

5 MR. FOSCO: With technology, your Honor.  
6 I'll just go over it in a little more detail.

7 BY MR. FOSCO:

8 Q. The blocks label CPP with technology, the program  
9 that's designated by SPPA achieved between 10- and  
10 20-percent peak load drop, correct?

11 A. Yes, 10 to 20 percent.

12 Q. And the same is true for the program labeled  
13 Olympic P, again, it achieved peak load drops between  
14 10 and 20 percent, correct, the critical peak pricing  
15 with technology?

16 A. Yes. These are probably much cooler climates  
17 than this one.

18 Q. Much cooler climates than what?

19 A. This one in Chicago. Olympic Peninsula is a  
20 cooler climate.

21 Q. But if we look at the Ameren studies, those were  
22 in southern Illinois, correct?

1       A.   Yes.

2       Q.   Those are a little bit warmer than the Chicago  
3   climate, correct?

4       A.   Yes.

5       Q.   Achieve results under 30 percent, correct?

6       A.   One is more than 30 percent.

7       Q.   One was less?

8       A.   Yes.

9       Q.   If you could refer to page five of six of your  
10   testimony.  At the bottom of page five is where I'm at  
11   right now.  You identified four programs there, is that  
12   correct?

13      A.   Yes.

14      Q.   And one of the programs was in California,  
15   correct?

16      A.   Yes.

17      Q.   Another in Florida, correct?

18      A.   Yes.

19      Q.   And another in Missouri, correct?

20      A.   Yes.

21      Q.   And those three are all in warmer climates than  
22   Illinois, correct?

1       A. Generally California is a cooler climate than  
2 Illinois. The population is mostly --

3       Q. Referring to page six. You refer to a Florida  
4 Golf Power study which achieved a peak -- a reduction in  
5 peak demand of 2.76 kilowatts, do you see that?

6       A. Yes.

7       Q. That's actually 122 percent of the average peak  
8 demand for ComEd's residential customers, is it not?

9       A. Yes.

10      Q. It would be impossible to achieve 122 percent  
11 demand reduction, would it not?

12      A. We're not suggesting that you can achieve --

13               MR. FOSCO: Thank you, Dr. Miyaji. I have  
14 no further questions. Your Honor, we have no objection  
15 to --

16               JUDGE HAYNES: Okay.

17               Staff have questions?

18               MR. FEELEY: Yes. I just have one question,  
19 one or two.

20                       CROSS EXAMINATION

21 BY MR. FEELEY:

22      Q. Good morning, Dr. Miyaji. My name is John Feeley

1 and I represent the Staff.

2 A. Good morning.

3 Q. Do you recall Mr. Fosco asked you about customers  
4 opting out of events?

5 A. Yes.

6 Q. If a customer calls to opt out of an event, is  
7 that customer eligible to be part of a sample used to  
8 determine the load reduction?

9 A. As I tried to explain, the sample is -- the load  
10 reduction is generally estimated as a small sampling.  
11 So if that customer was one of the customers that were  
12 in that statistical sample to make the measurements they  
13 would be used. However, it's highly unlikely that any  
14 particular customer would follow that sample. A program  
15 might be 100,000 participants and the sample might be  
16 one or 200 participants to make measurements.

17 Q. So if the customer calls to opt out, they're  
18 then -- yes, they're still used to determine the load  
19 reduction even though they opted out or they could be or  
20 it depends?

21 A. Well, when we estimate the entire program, we --  
22 that customer for that day as the general population.

1     So if you estimated, for instance, of a load reduction  
2     of --

3                 MR. FEELEY:  You have to start over and  
4     speak towards the Judge and JUDGE HAYNES reporter.

5                 THE WITNESS:  Okay, sorry.  So let me start  
6     again.  The question was is that customer used to  
7     estimate the average load reduction and what we do is if  
8     that customer is not part of the sample, then we don't  
9     have that customer as one of the participants for that  
10    day.  So that we multiply the total number of  
11    participants for that event day times the average that  
12    we measure and so then we get a reduction of that amount  
13    for that one customer -- total megawatts that we  
14    estimate.

15                JUDGE HAYNES:  But if they call and opt out  
16    of the event, they're still eligible to be a part of the  
17    sample?

18                THE WITNESS:  If they were one of those in  
19    the sample, yes.

20                JUDGE HAYNES:  Right.  They could still be  
21    one of the random --

22                THE WITNESS:  If they were randomly

1 selected, then they would -- can be used.

2 MR. FEELEY: That's all I have. Thank you.

3 MR. GIORDANO: Could we have just a couple  
4 of minutes.

5 JUDGE HAYNES: Sure.

6 MR. FOSCO: Your Honor, I forgot to move for  
7 admission of ComEd's cross exhibits one and two.

8 JUDGE HAYNES: Is there any objection?

9 MR. GIORDANO: No objection.

10 JUDGE HAYNES: Then Converge's Exhibits 2.0,  
11 2.1, 2.2, and ComEd Cross Exhibit 1 and ComEd Cross  
12 Exhibit 2 are admitted into the record and the hard  
13 copies were given to JUDGE HAYNES reporter. Thank you.

14 We'll take a break for a few minutes.

15 (Recess.)

16 JUDGE HAYNES: Let's go back on the record.  
17 Mr. Giordano, you have redirect.

18 MR. GIORDANO: Yes.

19 REDIRECT EXAMINATION

20 BY MR. GIORDANO:

21 Q. Dr. Miyaji, you were asked various questions  
22 about the way you calculated the numbers in the Converge

1 utility programs presented in Cross Exhibit 2.2 -- I  
2 mean, in Comverge Exhibit 2.2. Could you state how  
3 those numbers are utilized by the utility programs that  
4 Comverge works with two --

5 MR. FOSCO: Your Honor, I asked about the  
6 calculations of the numbers. I didn't ask any questions  
7 about how the utility programs used them. I think it's  
8 beyond the scope of my direct.

9 MR. GIORDANO: I don't think so. I mean  
10 that's the important thing, is how they're used by the  
11 utilities, how it's bid into markets, what the basis,  
12 how the basis is relevant and so --

13 JUDGE HAYNES: Overruled.

14 THE WITNESS: For those programs, these  
15 factors are used as the basis for how Comverge is  
16 compensated for operating the program for that  
17 particular program year.

18 BY MR. GIORDANO:

19 Q. Are the numbers also used to determine whether  
20 Comverge has delivered on what it contractually promised  
21 to deliver with respect to demand reductions?

22 A. Yes, that's true.



1 Q. How is that done?

2 A. How --

3 Q. How is it used for that purpose?

4 A. In these programs Converge has a megawatt demand  
5 response requirement as to the contract -- for their  
6 contract and these factors are then multiplied by the  
7 active enrolled customers to determine the megawatt  
8 delivery of the programs.

9 Q. Do you know how those numbers are utilized by the  
10 utilities for the purpose of bidding into capacity  
11 markets, such as the PJM capacity market?

12 A. The utilities in the organized markets use these  
13 factors to determine what they are going to bid forward  
14 into the markets and they are used in their operations  
15 as well in determining what their requirements are for  
16 reserve.

17 JUDGE HAYNES: Requirement for what?

18 THE WITNESS: Requirements for their  
19 reserve. This is where they have to estimate how many  
20 megawatts they have available to serve their customers  
21 on any particular day and then they consider this as  
22 part of their reserve as well as the amount of

1 generation they would have available.

2 BY MR. GIORDANO:

3 Q. You referring there to the -- when you said  
4 markets, were you referring to capacity markets or  
5 energy markets or both?

6 A. They use them for both.

7 Q. You referred to California being cooler than  
8 Illinois. Were you referring to any particular time  
9 that California is cooler than Illinois?

10 A. Well, most -- well, of course there are some  
11 parts of California that are very, very hot. A vast  
12 majority of the population is along the coast and it  
13 stays cool in the summer.

14 Q. So you're referring to the summer period,  
15 correct?

16 A. Yes. Yes, it's cooler here in the winter.

17 Q. Not as cool lately, but cool. Refer you to ComEd  
18 Cross Exhibit 2. We went over -- Mr. Fosco went over  
19 these various programs of CPP with tech with you. Isn't  
20 it true that -- how many of these programs had over 40  
21 percent peak load reduction out of the 13 programs  
22 listed here?

1       A. It looks to me like it's seven and one's very  
2 close to being 40 percent, seven or eight.

3       Q. After you presented your testimony in this  
4 docket, did you learn any information related to the  
5 ComEd system that you thought was relevant to your  
6 conclusions in this docket?

7               MR. FOSCO: Objection, your Honor. He  
8 hasn't tied this to anything on direct examination.

9               MR. GIORDANO: I can do that.

10      BY MR. GIORDANO:

11       Q. You were asked various questions by Mr. Fosco  
12 about your recommendation of .9 kilowatt being the  
13 appropriate demand reduction to be used by the  
14 commission in this proceeding in determining cost  
15 benefit analysis. Is there any information that you're  
16 aware of that also relates to that determination that  
17 you became aware of after you presented your testimony?  
18 I think it's relevant.

19               MR. FOSCO: I'm going to object, your Honor.  
20 This is a belated attempt to present direct testimony on  
21 redirect that is not really responsive to anything I  
22 asked. I did ask about this .9, but I didn't ask --

1     there was nothing about information that he would have  
2     had a full opportunity, if he did, to discuss it.  And  
3     this is -- I'm not sure what it is, but this seems like  
4     it's a belated attempt to improperly introduce indirect  
5     testimony.

6                   MR. GIORDANO:  He asked and cross examined  
7     him for about half an hour on his knowledge of his  
8     analysis of the specifics of the ComEd system and its  
9     ability to create peak load reductions through cycling  
10    in the ComEd specific system.  So I think it's important  
11    for the witness to be able to answer this, to the extent  
12    that he can add something to the record that's relevant.

13                   JUDGE HAYNES:  Maybe I agree with belated  
14    questions in response to that, but how's this  
15    procedurally proper if there's no information on  
16    redirect?

17                   MR. GIORDANO:  We can hold it, your Honor.  
18    We can use it on another -- for another witness, if  
19    that's what you prefer.

20                   JUDGE HAYNES:  I tend to agree with the  
21    company that -- procedurally this is not the time to  
22    introduce it.

1 JUDGE HAYNES: Okay. Then I have no further  
2 questions.

3 MR. FOSCO: Your Honor, I have one or two  
4 recross questions.

5 JUDGE HAYNES: Go ahead.

6 RECROSS EXAMINATION

7 BY MR. FOSCO:

8 Q. Dr. Miyaji, in response to redirect examination  
9 by your Counsel, you testified about how utilities use  
10 information to bid to the capacity markets, correct,  
11 that's what I just heard you indicate?

12 A. Yes.

13 Q. In point of fact, though, Comverge has stated  
14 they have no information about the capacity credits  
15 received by each utility clients, isn't that correct?

16 A. They don't know exactly what they receive, no.

17 Q. How can you talk about how your clients use that  
18 information to bid into the capacity markets if you have  
19 no idea what credits they have?

20 A. This is just a -- these measurements are just the  
21 basis of what they know -- learn that the program can  
22 provide.

1 Q. You're not actually involved in making bids to  
2 PJM, correct?

3 A. Correct.

4 Q. You don't really know exactly how they use that  
5 information, correct, you're not part of the bidding  
6 process?

7 A. That's -- we're not part of the bidding process.

8 Q. Would you agree that none of the programs that  
9 you cited were even bid into the PJM capacity market?

10 A. Could you state that again?

11 Q. Sure. Were any of the programs that -- do you  
12 know if any of the programs you cited were even bid into  
13 a PJM capacity market?

14 A. We have been told they are, but I have no data to  
15 show that because that's private.

16 Q. Which programs were bid into the PJM?

17 A. I can't specify which is which.

18 JUDGE HAYNES: The question specifically is  
19 the capacity markets.

20 MR. FOSCO: It's PJM capacity market, your  
21 Honor, is what I'm asking about.

22 MR. GIORDANO: You can't --

1 JUDGE HAYNES: Mr. Giordano?

2 MR. GIORDANO: Yes, your Honor. You can

3 answer the question.

4 THE WITNESS: I would have to identify the

5 program.

6 MR. GIORDANO: No, no. You can answer the

7 question. We have the utilities listed by number in

8 your Exhibit 2.2.

9 THE WITNESS: 2.2, which one those numbers

10 is in the market?

11 MR. GIORDANO: Yes, yes.

12 THE WITNESS: Number four.

13 BY MR. FOSCO:

14 Q. Number four?

15 A. Yes.

16 MR. FOSCO: No further questions, your

17 Honor.

18 JUDGE HAYNES: Okay. Thank you, Dr. Miyaji.

19 Good morning, Mr. Lacey.

20 MR. Lacey: Good morning, your Honor.

21 JUDGE HAYNES: Please raise your right hand.

22 Do you solemnly swear to tell the truth, the

1 whole truth, and nothing but the truth?

2 THE WITNESS: I do.

3 JUDGE HAYNES: Thank you.

4 DIRECT EXAMINATION

5 BY MR. GIORDANO:

6 Q. Mr. Lacey, I show you what is marked as Converge  
7 Exhibit 1.0 and 1 -- no, 1.0, sorry, and ask if you are  
8 adopting this testimony, it's entitled and was filed as  
9 the direct testimony of Blake Young. Are you adopting  
10 this testimony and sponsoring it as the direct testimony  
11 of Blake Young and Frank Lacey?

12 A. I am, yes.

13 MR. FOSCO: Your Honor, can we go off the  
14 record for one second?

15 JUDGE HAYNES: Yes.

16 (Off-the-record discussion.)

17 JUDGE HAYNES: Back on the record.

18 BY MR. GIORDANO:

19 Q. Mr. Lacey, do you have any revisions to your  
20 testimony, to the testimony of yourself and Mr. Young?

21 A. I do, yes. A couple of very minor ones. On page  
22 three, line 26, after the word schemes there should be a



1 period and then the T in the word to, t-o, should be  
2 capitalized. And then on page ten -- I'm sorry, page  
3 five, line ten, there's a duplicate of the word that,  
4 one of those should be removed. And then the question  
5 on line 15, does Converge administer demand response  
6 programs in the PJM region. The answer should just be  
7 yes. And the last part of that, and this is a  
8 significant piece of our business today should be  
9 omitted.

10 Q. With those corrections, if I were to ask you the  
11 same questions that are in Converge Exhibit 1.0 today,  
12 would the answers be the same?

13 A. They would, yes.

14 MR. GIORDANO: I move for the admission of  
15 the direct testimony of Blake Young and Frank Lacey,  
16 Converge Exhibit 1.0 into the record, subject to cross  
17 examination. And I appreciate the indulgence of the  
18 Judge and the other parties in accepting this testimony  
19 in this fashion.

20 JUDGE HAYNES: Has this been filed in  
21 e-Docket?

22 MR. GIORDANO: Yes.

1 JUDGE HAYNES: Okay. Does the company want  
2 to wait until after cross?

3 MS. RUBNER: Your Honor, yes, we would  
4 actually.

5 JUDGE HAYNES: Okay. Go ahead.

6 CROSS EXAMINATION

7 BY MS. RUBNER:

8 Q. Good morning, Mr. Lacey.

9 A. Good morning.

10 Q. You're familiar with what it cost Converge to  
11 acquire customer acquisition in their exam response  
12 programs, correct.

13 A. Not specifically.

14 Q. Would you agree, subject to check, that the  
15 average cost is over \$150?

16 A. For customer acquisition?

17 Q. For the cost of the actual device and for the  
18 cost of installing?

19 A. Yes.

20 Q. Would you agree that customer acquisition would  
21 be in the \$30 range?

22 A. That sounds reasonable.

1       Q. The cost of the equipment, the cost of the  
2       installation, and the cost of the customer acquisition  
3       added up to over \$150, and would you agree that the  
4       current price in the PJM market, as of today, is \$6 per  
5       kilowatt hour -- per kilowatt, strike hour, please?

6       A. That's per kilowatt year?

7       Q. Yes.

8       A. But that is the market price for this past year.  
9       We already know that it's going to be \$61,000 or six --  
10      \$61,000 per megawatt year, so divide that by 1000 per  
11      kilowatt year. So it's going up about tenfold over the  
12      next three years.

13      Q. The current price for this year is \$6, correct?

14      A. This past year. The summer season has already  
15      ended. Yes.

16                   MS. RUBNER: May I have one moment?

17                   JUDGE HAYNES: Yes.

18      BY MS. RUBNER:

19      Q. According to public documentation on the PJM  
20      website, next year the market clearing price is going to  
21      be \$10, correct?

22      A. I believe that's correct. Yes.

1 Q. According to the same source, the year after that  
2 is going to raise to approximately \$40, correct?

3 MR. GIORDANO: Objection. The market  
4 clearing price, we need clarification on what you're  
5 asking about. Are you asking about the PJM capacity  
6 market? It just doesn't --

7 MS. RUBNER: The residual option clearing  
8 price is what we're asking.

9 MR. GIORDANO: In the PJM capacity market?

10 MS. RUBNER: Correct.

11 MR. GIORDANO: For what year?

12 MS. RUBNER: For this year, the current  
13 year, which is \$6, next year which I stated was and the  
14 witness agreed to \$10, and then for the year after that  
15 it is approximately \$41 -- \$49.

16 MR. GIORDANO: That's what you're asking the  
17 witness?

18 JUDGE HAYNES: What was it, 40 or 49?

19 MS. RUBNER: It's \$49, your Honor.

20 THE WITNESS: I can't verify that.

21 BY MS. RUBNER:

22 Q. Subject to check, it's publically available on

1     their website.

2           A.   I know that it's publically available.   I do know  
3     that the 15, 16 numbers, \$61,00 or \$61, I know this year  
4     it's six.   I don't really know the interim years, I  
5     didn't check those.   So -- I know it's publically  
6     available.

7           Q.   Those figures are significantly less than the  
8     cost to recruit a demand response participant, correct?

9           A.   I don't know what you mean by that.

10          Q.   Well, we just discussed that recruit a  
11     participant in a demand response program, it is over  
12     \$150, correct?

13          A.   Yes.

14          Q.   And the number that we just discussed regarding  
15     the base residual option clearing prices are  
16     significantly less than \$150, correct, \$6 is  
17     significantly less than \$150?

18          A.   Yes.   The \$6 is irrelevant because that's in the  
19     past.   I mean to be honest, okay.   So, if you take \$61,  
20     any investment is not recouped in a year, right.  
21     Transmission lines aren't recouped in a year,  
22     transmission rates are what, half a cent or whatever

1     they are for kilowatt hour.  You're not going to recoup  
2     that in a year.  So, no, you're not going to recoup the  
3     cost of this in a year, but these assets last 10, 20  
4     years.

5         Q.  The question is \$6 significantly less than 150?

6         A.  Six is significantly less than 150.  Yes.

7         Q.  Thank you.  What recovery period do you think a  
8     direct load control investment should be made?

9         A.  That depends on numerous factors.  Companies  
10     internal -- rate, companies cost of capital.  It's no  
11     different than any other investment.  So there's lots of  
12     variables that go into that and I really can't speak for  
13     ComEd on that.

14         Q.  What about Converge?

15         A.  Again, it depends on the parameters of the  
16     program.  Are we bearing the risk, are we -- is it what  
17     we call a virtual peaking capacity kind of contract or  
18     is it a turnkey where we're just providing megawatts for  
19     a fee.  There are different answers.

20         Q.  What period of time would you generally look for  
21     a three-year to five-year payback?

22         A.  I'm sorry?

1 MS. RUBNER: Your Honor, may I have one  
2 moment?

3 JUDGE HAYNES: Yes.

4 BY MS. RUBNER:

5 Q. What would be the payback period that you would  
6 need in order to make the investment?

7 A. It would depend on really the term of the  
8 contract, what market it was in. If we had a -- I'm  
9 guessing if we had a three-year contract in eastern PJM  
10 two years ago, three years would have been enough.

11 Q. Generally speaking?

12 A. It depends on too many things, there is no  
13 generally. Every market is different, every utility is  
14 different. I'm not trying to evade the question. There  
15 is no general answer.

16 Q. Would Comverge make an investment with a ten-year  
17 pay back period?

18 A. I don't think that would meet our hurdle rate,  
19 internal rates of return.

20 MS. RUBNER: One moment, your Honor.

21 BY MS. RUBNER:

22 Q. Mr. Lacey, is it true that in the last annual

1 report filed by Comverge, that we found publically  
2 available as of 2010, and I have a copy of it if you'd  
3 like to refer to it. On page ten of that report, under  
4 risk related to our business it states that Comverge has  
5 incurred annual net losses since inception, and then  
6 further in that paragraph it talks about in the short  
7 term the company expects that the capacity contracts  
8 will continue have a negative effect on earnings because  
9 of consumer acquisition costs being incurred during the  
10 installation phase of the contract and those increased  
11 costs may cost Comverge to incur net loss in the  
12 foreseeable future.

13 MR. GIORDANO: Objection. Comverge's  
14 financial situation is not relevant to this proceeding.  
15 This proceeding is about whether it's cost beneficial to  
16 adopt direct load control devices as part of ComEd's  
17 peak time rebate tariff. Comverge's financial situation  
18 dated from 2010 is clearly not relevant.

19 MS. RUBNER: Your Honor, I believe this is  
20 relevant. It discusses the expense of the acquisition  
21 costs which is something that he's testified to, and the  
22 effect and how that acquisition costs affects their



1 ability to incur profit. The main point is that it  
2 shows -- it goes to the effect of the expense of the  
3 acquisition costs.

4 MR. GIORDANO: The acquisition costs are in  
5 this record, they've been accepted. The cost of direct  
6 load control devices are not even in dispute in this  
7 proceeding. The costs have been presented in the cost  
8 benefit analysis by ComEd. They were not challenged by  
9 Comverge or any other party to this proceeding. That's  
10 established. We're wasting a lot of time when the costs  
11 are not -- they're not even in dispute. The only issue  
12 in this proceeding related is how the peak load is  
13 calculated to determine the benefits. The costs are not  
14 even an issue. This is clearly beyond the scope.

15 MS. RUBNER: It's not, your Honor. He has  
16 statements and testimony related to cost statements,  
17 saying that that program is cost beneficial and this  
18 program that this company runs that would be identical  
19 to what ComEd would be adopting and running in the state  
20 and how those costs affect -- the outcome of those costs  
21 is very relevant.

22 MR. GIORDANO: Again I would -- we've

1     accepted the ComEd cost from the --

2                   JUDGE HAYNES:   The objection is sustained.

3     BY MS. RUBNER:

4           Q.   Mr. Lacey, in the direct testimony of Mr. Young,  
5     Comverge Exhibit 1.0, on page one, lines nine through  
6     13, can I please refer you to that?

7           A.   Okay.

8           Q.   It states that Comverge is a longstanding  
9     provider of intelligent energy solutions and a  
10    recognized leader in providing peak demand response  
11    services for residential and business customers  
12    throughout the country, correct?

13          A.   Yes, it does.

14          Q.   In response to a data request, where Commonwealth  
15    Edison asks you to describe each piece demand response  
16    service that Comverge has been providing to residential  
17    and business customers throughout the country, and we  
18    also asked you in that request to identify your clients  
19    that have received peak demand response services from  
20    you, the response was that you told us that the services  
21    included DCUs and PCTs and that you declined to provide  
22    any client information, regardless of the protective

1 order in this docket, correct?

2 MR. GIORDANO: Miss Rubner, can you identify  
3 which data request --

4 MS. RUBNER: I can actually provide ComEd's  
5 group exhibit -- cross group Exhibit 3.

6 MS. RUBNER: May I approach the witness,  
7 your Honor?

8 JUDGE HAYNES: Yes.

9 BY MS. RUBNER:

10 Q. Looking at the first page of ComEd's cross group  
11 Exhibit 3, your responses from Comverge to ComEd's data  
12 request 2.1 to Comverge, in that response Comverge  
13 indicates that Comverge services include DCUs and PCTs  
14 and then after stating that that's what your services  
15 include, you decline to provide any substantive  
16 information to support those comments, correct?

17 A. I don't think we refused to provide any  
18 information. We answered the question that was asked.  
19 We are prohibited -- you've asked us to identify each  
20 client. We are contractually prohibited from  
21 identifying some of our clients.

22 MS. RUBNER: Can we go into closed session?

1 JUDGE HAYNES: Maybe your attorney wants to  
2 address that?

3 MR. GIORDANO: I don't think it's really  
4 necessary. The work -- again there's no -- and no one  
5 has even signed a confidentiality agreement in this  
6 case. I mean, they have not signed the form one, so I  
7 think there's no way to protect any of this information.  
8 There was no way we had to produce it, there was no way  
9 we could produce it. And so it's very clear that there  
10 was an order granted how confidential information would  
11 be handled, and we received nothing from any party  
12 related to signing the proprietary and confidentiality  
13 agreement. So it would be highly inappropriate. We  
14 could have a closed session, but the only ones here  
15 would be Converge and your Honor and you wouldn't be  
16 able to cross. So you wouldn't be here, so that might  
17 be a problem.

18 MS. RUBNER: Your Honor, the company was  
19 always willing to sign a protective order of all our  
20 conversations, what we had with the attorney regarding  
21 the issues. Further, Converge never produced any  
22 information showing us the contract in redacted form

1     that showed us that there was a provision in there that  
2     prevented that information from coming out.

3             MR. GIORDANO:  Those discussions, frankly,  
4     ComEd was not responsive.  We repeatedly had -- we had  
5     calls with ComEd and then ComEd would not respond for  
6     about a week.  They wouldn't call us back.  But the  
7     reality is at this point nothing's been signed.  
8     Regardless of the discussions, ComEd could have filed a  
9     confidentiality agreement and they didn't do it.

10            JUDGE HAYNES:  I also have a question.  This  
11     thing is dated November 15th.  Why am I hearing about it  
12     for the first time right now?

13            That's a question for ComEd.  I'm sorry.

14            MS. RUBNER:  One moment, your Honor.

15            We'll withdraw the question.  We'll withdraw  
16     the request to go into closed session.

17            JUDGE HAYNES:  Okay.

18     BY MS. RUBNER:

19            Q.  Mr. Lacey, are you able to tell us the names of  
20     your clients on the record?

21            A.  This interrogatory asks for each client.  
22     Comverge has been in business for many, many, many

1 years, so I could not give you an exhaustive list. I  
2 could name a few customers who I know --

3 Q. Utility clients?

4 A. Yes. I could name a few utility customers that I  
5 know are in the public domain. I would not venture to  
6 say that that's even anywhere near the exhaustive list  
7 because I just don't know the specific contract  
8 provisions of all our customers. If you would like me  
9 to do that, I can give you two or three that I know --

10 Q. Okay.

11 A. We do work for Tampa Electric.

12 JUDGE HAYNES: What electric?

13 THE WITNESS: Tampa, Tampa Florida, Tampa  
14 Electric. We do work for Gulf Power which is part of  
15 the southern company also in Florida. We do work for  
16 PEPCO, which is an electric power company, it's in D.C.  
17 in the PJM region. Those are the ones that I know for a  
18 fact are in the public domain.

19 BY MS. RUBNER:

20 Q. The second page of ComEd's group cross Exhibit 3,  
21 the data request that ComEd submitted to Converge  
22 relating to page one of your testimony. At line eleven,

1     where it states that Comverge is the leading provider of  
2     demand response programs. Commonwealth Edison company  
3     in the data requests ask you to define the methods that  
4     were used and to provide data that was supporting that  
5     statement. In response, you stated -- Comverge stated  
6     that it enrolled over a million customers in a variety  
7     of demand response programs, that Comverge markets were  
8     administered on behalf of utilities across the country.  
9     That response provided no data support for the statement  
10    in the testimony as Comverge is a leading provider nor  
11    does it provide any additional support for -- nor does  
12    it provide any support for the additional number in your  
13    testimony, correct?

14         A. The data is the million-25,000 customers. I  
15    didn't know that you were looking for anything more than  
16    that.

17         Q. When we asked for provide supporting data, you  
18    didn't provide any supporting data for that number,  
19    correct?

20         A. You asked for the metric and the data. The  
21    metric is number of customers, the data is we have over  
22    a million customers enrolled in our programs.

1 MS. RUBNER: May I have one moment?

2 JUDGE HAYNES: Yes.

3 BY MS. RUBNER:

4 Q. Can you please turn to page five of Converge  
5 Exhibit 1?

6 A. Yes.

7 Q. At line 25 it says -- well, sorry. At line 19,  
8 the question asks can you discuss specific programs in  
9 the PJM market, correct?

10 A. Yes, it does.

11 Q. In that answer you state that PECO is one of the  
12 more successful programs that you have, correct?

13 A. Yes.

14 Q. And PECO provides a PCT to be installed in a  
15 commercial customer's business that allows the utility  
16 to raise the temperature settings in response to  
17 curtailment events, from lines 25 to 27, correct?

18 A. Yes.

19 Q. Starting on line 29, it states that both of these  
20 programs have been proven to be tremendously cost  
21 effective and that PECO is currently working with  
22 regulators in Pennsylvania to extend the program to May



1 of 2013, correct?

2 A. They're working with PC to extend it beyond 2013.

3 Q. Thank you for that correction. And then it  
4 states that in fact PECO has filed a cost benefit  
5 analysis with the Pennsylvania Public Utility Commission  
6 in Docket P 2012 23 2334, correct?

7 A. That is correct.

8 Q. And that shows that the residential demand  
9 response program utilizing direct load control  
10 technology has achieved a cost benefit ratio 2.48 and a  
11 present net value benefit of 131.6 million, correct?

12 A. That is correct.

13 Q. Isn't it true that that cost benefit ratio of  
14 2.48 does not include the actual cost of the equipment?

15 A. I believe that that includes a very small portion  
16 of the equipment, but I'd have to look at the study to  
17 verify it. So what PECO was asking for was to extend  
18 the program and to prepare for what is -- called phase  
19 three. So some marginal growth, but the majority of it  
20 is the existing, you know, 100,000 customers or so that  
21 we have in that program.

22 Q. It included the replacement of the equipment, but

1 not the original installation of the equipment?

2 A. I believe it includes -- the way the Pennsylvania  
3 structure works is there are load drops that were  
4 required by this past summer and then there's a series  
5 of regulatory things that will happen over the next  
6 couple of months, and then if they work one way, they'll  
7 have further load drops required by the summer of 2016.  
8 So they were asking to do some additional prep work for  
9 that summer of 2016 as well as maintain the current  
10 system. So there is some -- there is some -- I believe  
11 there's some load drop, but I would have to go back and  
12 look at the study to verify that.

13 Q. This program from PECO addressed equipment that  
14 was already installed, correct?

15 A. Yes, for the majority of customers, 100,000 or so  
16 customers already installed.

17 MS. RUBNER: I have no further questions.

18 JUDGE HAYNES: Okay, redirect? Or I'm  
19 sorry, does Staff have questions?

20 MR. FEELEY: We have no cross.

21 JUDGE HAYNES: Anybody else have cross on  
22 Comverge Exhibit 1.0?

1 MR. GHOSHEL: No.

2 JUDGE HAYNES: Okay. Redirect.

3 REDIRECT EXAMINATION

4 BY MR. GIORDANO:

5 Q. You were asked some questions regarding the PJM  
6 clearing price?

7 A. Yes.

8 Q. And the residual options, capacity options. Why  
9 do you think it's important that the residual option  
10 price has increased substantially related to this  
11 docket?

12 A. Well, I think it's important to note -- I mean,  
13 it's important to note because capacity prices are  
14 rising and so demand response offers greater benefit to  
15 the customers over time, and while it might not be cost  
16 effective last summer in ComEd, certainly in three years  
17 time it will be cost effective.

18 Q. Do you have an opinion or do you know why the  
19 demand -- the capacity prices went down to such a low  
20 level during the year that's just past?

21 A. I suspect it's a lot of reasons. I suspect the  
22 influx of demand response in PJM had an effect on that.

1 I think some just kind of general economic conditions  
2 had an impact on that. I think it's a lot of things,  
3 but --

4 Q. Do you know what the increase in capacity price  
5 has been of the latest PJM residual capacity option,  
6 what that price is coming out of the -- that came in the  
7 2015-16 option?

8 A. For the most of the PJM, including the ComEd  
9 zone, it will be \$61,000 per megawatt year or \$61 per  
10 KW year.

11 Q. Just so we're clear on these numbers, they're  
12 different, were coming in different ways. How does that  
13 compare with the number for the 2011-2012 period?

14 A. The 1213 period is the one that just ended. Is  
15 that what you're asking?

16 Q. Yes.

17 A. It's about a ten-X increase.

18 Q. Ten times?

19 A. Ten times increase over the next three years.

20 MR. GIORDANO: We don't have anything  
21 further. Thank you.

22 JUDGE HAYNES: Okay.

1 MS. RUBNER: One question, your Honor.

2 JUDGE HAYNES: Okay.

3 RECROSS EXAMINATION

4 BY MS. RUBNER:

5 Q. That \$61 number that you just talked about, can  
6 you get that dollar for -- or can you get that amount,  
7 \$61 kilowatt, now that the option is over?

8 A. That -- those dollars are coming. I don't know  
9 what you mean can you get them. They're there, that's  
10 the market price for capacity.

11 Q. ComEd cannot bid into the auction for the \$61  
12 kilowatt because that auction is over, correct?

13 A. That auction has passed. They would have to bid  
14 into the next one.

15 MS. RUBNER: Thank you.

16 REDIRECT EXAMINATION

17 BY MR. GIORDANO:

18 Q. Do you expect the auction prices for the next  
19 auction to be comparable or higher than the auction  
20 price for the 15, 16?

21 A. I see no reason to think they'd go down. There's  
22 a lot of pressure on conventional capacity right now,

1 full -- et cetera, coming under EPA scrutiny. So I'd  
2 actually expect the capacity prices to rise over time.  
3 But I certainly don't know what they would be or else  
4 I'd be retired.

5 Q. What's the best way to reduce those capacity  
6 prices in that auction?

7 MS. RUBNER: Objection, beyond the scope.

8 JUDGE HAYNES: Sustained.

9 No further questions?

10 MS. RUBNER: No, your Honor.

11 JUDGE HAYNES: Thank you. Fair enough.

12 Stay up here. You're still under oath and I'd like  
13 to -- okay. Let's go ahead and does the -- does anybody  
14 have -- no, that's in the record. Okay, go ahead.

15 THE WITNESS: Your Honor, can I have two  
16 minutes to just shuffle papers and stuff?

17 JUDGE HAYNES: Yes.

18 MR. FOSCO: Your Honor, do we want to admit  
19 Mr. Young's exhibits?

20 JUDGE HAYNES: I think --

21 MR. FOSCO: I think you reserved it, pending  
22 our cross.

1 JUDGE HAYNES: Do you have any objection?

2 MS. RUBNER: No.

3 JUDGE HAYNES: Comverge Exhibit 1.0, the  
4 Young/Lacy direct testimony is admitted into the record.

5 Okay, couple of minutes break.

6 (Recess.)

7 JUDGE HAYNES: Go back on the record.

8 DIRECT EXAMINATION

9 BY MR. GIORDANO:

10 Q. Mr. Lacey, I show you what's been marked as  
11 Comverge Exhibits 3.0, 3.1, and 3.2, and ask you if this  
12 testimony was prepared by you or under your supervision?

13 A. It was, yes.

14 Q. If I were to ask you these same questions today,  
15 would your answers be the same?

16 A. They would, yes.

17 MR. GIORDANO: We move for the admission of  
18 Comverge Exhibit 3.0, 3.1, and 3.2, and tender the  
19 witness for cross examination.

20 JUDGE HAYNES: Any objection?

21 MR. FOSCO: No objection.

22 JUDGE HAYNES: Comverge Exhibit 3.0, 3.1,

1 and 3.2 are admitted into the record.

2 ComEd.

3 CROSS EXAMINATION

4 BY MR. FOSCO:

5 Q. Good morning, Mr. Lacey.

6 A. Good morning.

7 Q. My name is Carmen Fosco, I'm one of the attorneys  
8 representing ComEd. I believe in the introduction to  
9 your testimony you mentioned that ComEd had -- I'm  
10 sorry, that Comverge had provided a program in Illinois.  
11 Do you recall that, a response program in Illinois?

12 MR. GIORDANO: Can you give a specific  
13 reference? You said it was in his testimony.

14 JUDGE HAYNES: Page one, line 14.

15 MR. FOSCO: Yes. Thank you.

16 THE WITNESS: It says we provide peak demand  
17 services in Illinois.

18 BY MR. FOSCO:

19 Q. Is that a reference to the ComEd realtime pricing  
20 program?

21 A. It's a reference to the devices that we sell to  
22 ComEd and to their demand response program, yes.



1       Q. Comverge administered ComEd peak time -- I'm  
2       sorry. Did Comverge manage ComEd's realtime pricing  
3       program for a period of time?

4       A. I believe we did, yes.

5       Q. That was a program that involved the recruitment  
6       of customers to sign up for that program, that was part  
7       of Comverge's responsibility, correct?

8       A. A contract was signed before I started. I don't  
9       really know the details of that contract.

10      Q. Are you aware that only approximately 11,000  
11      customers were signed up by Comverge while running the  
12      program?

13      A. I was not.

14      Q. You provided a revised cost benefit analysis of  
15      providing direct load control devices for a ComEd peak  
16      time rebate program, correct?

17      A. I did. Yes.

18      Q. You used the spreadsheet analysis model that  
19      ComEd provided and manipulated that spreadsheet analysis  
20      model, is that correct?

21      A. I changed one assumption on that model, yes. I  
22      used that as my base and changed the assumption of that

1 incremental drop.

2 Q. What do the numbers produced by that model show,  
3 what are they designed to measure?

4 A. Net benefits of a program.

5 Q. Doesn't it actually show the net benefits -- I'm  
6 sorry. Doesn't it actually show the incremental costs  
7 of providing -- as presented in this case, this is a  
8 study that actually presents the Delta between providing  
9 peak time rebate program without direct load control  
10 technology and with?

11 A. Could you repeat that question?

12 Q. Mr. Lacey, isn't it correct that the cost benefit  
13 study that ComEd presented in this case doesn't show the  
14 net present value of providing a peak time rebate  
15 program, but instead shows the incremental costs of  
16 providing that program with direct load control  
17 technology versus without?

18 A. I think it shows the incremental benefit, not the  
19 incremental cost. It evaluates costs and -- it shows  
20 incremental benefit.

21 Q. With that clarification, you agree with me?

22 A. Yes. I think it shows the incremental net

1 benefit of including direct load control.

2 Q. That study provides various scenarios, the cost  
3 benefit analysis model presented that ComEd presented  
4 and revised, it looks at various scenarios for a variety  
5 of peak time rebate programs with or without direct load  
6 control, correct?

7 A. It does evaluate I think it was eight scenarios.

8 Q. And you testified that you eliminated two of  
9 ComEd's scenarios which assumed that the 10 percent peak  
10 load reduction for peak time rebate without enabling  
11 direct load control technology and 20 percent with  
12 enabled direct load control technology, correct, page  
13 two, line three to six?

14 A. Lines which one?

15 Q. Lines three to six?

16 A. Yes, that is correct.

17 Q. What are these scenarios that you analyzed in the  
18 revised study as you revised it?

19 A. We had some difficulty wording this phrase  
20 because ComEd presented -- it was arguable about whether  
21 ComEd presented eight scenarios or four scenarios,  
22 because there were different scenarios with -- they were

1 the same scenarios with different assumptions, so they  
2 were kind of repeating scenarios. So ultimately --

3 Q. Would it help if I went through one by one then?

4 A. It would be very helpful if you had the  
5 spreadsheet because then I could look at the spreadsheet  
6 which I don't have.

7 Q. By spreadsheet, you mean your work papers or part  
8 of your work papers?

9 A. Yes.

10 MR. FOSCO: Your Honor, I don't think I'm  
11 going to end up introducing this, but I'd like to show  
12 it to the witness and it's a big document so I only have  
13 a couple of copies.

14 JUDGE HAYNES: Okay. Is that okay with you,  
15 Mr. Giordano?

16 MR. GIORDANO: Depending on what it is, yes.  
17 Yes, these fine. Do you have one?

18 MR. FOSCO: I think I have one more.

19 BY MR. FOSCO:

20 Q. Mr. Lacey, I've shown you what's been marked  
21 ComEd Cross Exhibit 4. Do you recognize that's a copy  
22 of your work papers?

1       A.   I do, yes.

2       Q.   Would you agree that there are basically -- well,  
3       there's four different sets of assumptions regarding the  
4       peak time rebate participation rates and load reductions  
5       which I'll go through those.   The first one would be  
6       where the participation rate starts at 4 percent of the  
7       available customers, correct, with an increase each year  
8       of half a percent.   Is that one of the scenarios?

9       A.   That is.

10      Q.   There's also another scenario that is 4 percent  
11      with an annual increase of 1 percent?

12      A.   Yes.

13      Q.   And then those two scenarios are further  
14      subdivided to an increase in load reduction using direct  
15      load control technology, correct?

16      A.   Correct.

17      Q.   So one would be -- I want to get your  
18      understanding.   Your scenarios are, if I understand it,  
19      you're looking at without direct load control technology  
20      a 10-percent load reduction and with you're looking at a  
21      30 percent total load drop?

22      A.   A 40 percent total, a 30 percent incremental.

1 Q. You do that for both the 4 percent with a half  
2 percent growth and 4 percent --

3 A. Correct.

4 Q. Then you also look at another scenario -- well,  
5 let me back up. In a ComEd study that was comparing a  
6 10 percent drop without direct load control technology  
7 and a 20 percent peak load drop with enabling --

8 A. Correct.

9 Q. Then the second set of your assumptions, do you  
10 look at -- again with the 4 percent plus half plus one,  
11 but on the load reduction side, if I understand your  
12 scenarios, I can't tell if you're showing 20 percent  
13 without direct load control technology and 50 percent  
14 with?

15 A. No, 40 percent with.

16 Q. Because you refer to a 30 percent incremental  
17 increase?

18 A. So ComEd made an assumption -- these work papers  
19 started with the ComEd model. ComEd made an assumption  
20 that if you had 10 percent load reduction without direct  
21 load control, with direct load control that would double  
22 to 20 percent. ComEd also made an assumption that said

1 if it was 20 percent without direct load control, it  
2 would double to 40. I basically changed the 10 to 20  
3 scenarios to 10 to 40, based on the testimony that's  
4 been presented in this case.

5 Q. So in this scenario -- would you agree that there  
6 are various customer choices that have to be made as to  
7 whether or not they participate in this, including with  
8 and without direct load control technology?

9 A. Absolutely.

10 Q. So there's a range of load reduction results that  
11 could occur even with direct load technology, depending  
12 on customer reaction?

13 A. Systemwide?

14 Q. Yes.

15 A. Yes.

16 Q. Yet your assumption that no matter what, with  
17 direct load control technology we're going to achieve a  
18 40-percent load drop. You don't have any other load --  
19 if I understand your study, you don't allow for any  
20 other lower result with direct load control technology?

21 A. Well, ComEd has based into this model the  
22 assumption that only 25 percent of the DLC market takes

1 direct load control, so that assumption is already  
2 backed in.

3 Q. We'll get to that in a bit. But in terms of the  
4 direct -- the load drop, which is -- in terms of the  
5 load drop achieved, you're not allowing for any variance  
6 based on customer choice?

7 A. I think that's already built into the model.

8 Q. Well, okay. Let's jump ahead. What you were  
9 talking about is -- you mentioned a total of eight  
10 scenarios, actually I guess -- it's really about 16, we  
11 got four along the left and four along the right,  
12 correct? For each of the four scenarios that we just  
13 discussed, there were four direct load control  
14 participation rates for those customers that were in the  
15 program, correct?

16 A. I think there were two.

17 Q. Well, there were two types of equipment, two  
18 rates, so it was --

19 A. I think the equipment assumption is blended in  
20 the model.

21 Q. Isn't the one assumption 25 percent direct  
22 control unit, 50 percent direct control unit, and then



1 25 percent programable communicating thermostat and the  
2 50 percent programable communicated thermostat, isn't  
3 that the four counter scenarios overlaid against the  
4 four we earlier discussed?

5 A. That wasn't my assumption, I don't recall. I can  
6 -- it'll take a minute.

7 Q. Feel free, they're your work papers.

8 A. I'm sorry, you're right. There were  
9 scenarios, 25 percent DCU takers, 50 percent DCU takers,  
10 which is direct control unit, and then 25 and 50 for the  
11 thermostats.

12 Q. For the benefit of everyone that didn't stay up  
13 late reading this, what that means then is that -- tell  
14 me if I'm correct here. That of the customers that  
15 elect to participate in the peak time rebate program,  
16 the different scenarios are one assumes that they all  
17 take direct control units as their -- that 25 percent of  
18 those customers elect to take enabling equipment and the  
19 equipment they chose is a direct control unit?

20 A. Correct.

21 Q. And the other scenario is 50 percent of the  
22 customers will -- participating in the peak time rebate

1 program, 50 percent elect to take the direct --

2 A. Correct.

3 Q. And the same thing for a programmable control  
4 thermostat?

5 A. Exactly.

6 Q. It studies four different equipment scenarios?

7 A. Yes.

8 Q. Would you agree with me that none of those  
9 equipment scenarios have anything to do with how a  
10 customer might respond to actually reducing their peak  
11 load, it's just about whether they selected, you know,  
12 elected to receive equipment or not?

13 A. I think that statement is probably a little  
14 strong. I would assume that a customer would want to  
15 participate in PTR if they choose to opt into the  
16 program and then get the control equipment. So I would  
17 assume they would want -- if they opted for control  
18 technology, they would want to be controlled and,  
19 therefore, it would affect how they curtailed.

20 Q. Are you assuming that they want to be controlled  
21 however someone decides and not their own choice?

22 A. I made the assumption that they would be

1 controlled during curtailment event and a curtailment  
2 event would get the load drop that Dr. Miyaji testified  
3 about earlier today.

4 Q. Did you envision that they would have a choice to  
5 opt out of events?

6 A. I did, yes.

7 Q. They might opt out at different rates, correct?

8 A. They might.

9 Q. You didn't perform any particular study of what  
10 the likely opt out rates are, correct?

11 A. No. Our opt out rates are pretty small,  
12 Dr. Miyaji talked about that this morning.

13 Q. You accept, though, the ComEd study in terms of  
14 finding that without direct load control technology  
15 participated load drop achieve might range between  
16 10 and 20 percent?

17 A. Actually in -- I believe that these estimates  
18 were based on what Dr. Brakewaid(phonetic) said in the  
19 AMI proceeding, I'm assuming that. Dr. Brakewaid said  
20 in the AMI proceeding 20 percent could be achieved with  
21 a hybrid, a mix of some people taking direct load  
22 technology. So I believe the 10 percent might be

1     achievable, but I'm not sure about the 20.

2           Q.   One fact Dr. Miyaji, the study that he discussed  
3     showed some peak time rebate programs approaching 20  
4     percent without direct load control technology, correct?

5           A.   I don't have that study.

6           Q.   I thought you just testified you relied on  
7     Dr. Miyaji --

8           A.   I did. I mean, I'm happy to look at it. I don't  
9     have the study memorized.

10          Q.   Did you review the Faruqui study relied upon by  
11     Mr. Miyaji?

12          A.   I've looked at it, yes.

13          Q.   Isn't it true, Mr. Lacey, that TJM does not  
14     require direct load control technology to participate in  
15     PJM capacity markets?

16          A.   They do not.

17          Q.   You also testified that you believe that TJM may  
18     require enabling direct load control technology at page  
19     25, line 21, of your testimony, correct?

20          A.   Yes.

21          Q.   Is it your position that at some point in time  
22     PJM would prohibit participation in its capacity markets

1 for anyone not using direct load control technology?

2 A. No, not at all. I think for lots of reasons CNI  
3 customers can't use direct load control, human safety  
4 reasons, and they rely on human intervention and, you  
5 know, it might be a digital signal to get the human  
6 intervention. So, for safety reasons, I don't think PJM  
7 would ever make that kind of requirement. But for  
8 residential programs, I just don't see them working  
9 under -- without direct load control in an emergency  
10 load response program, which is what the capacity market  
11 is.

12 Q. Just so I clearly understand your answer. Let's  
13 limit it to residential --

14 A. Okay.

15 Q. It's your testimony that you believe PJM will  
16 prohibit bidding into the capacity markets without  
17 direct load control at some point in the future?

18 A. I don't know what they're working on in the  
19 future, I don't know if they will. You know, I talked  
20 about their demand response program which requires  
21 direct load control. To my knowledge their TRD program  
22 which --

1       Q. You don't know what they're doing, but I think  
2       you just said -- you just testified that you believe  
3       they will do something. What's that based on?

4               MR. GIORDANO: Objection. I think that's a  
5       mischaracterization of his answer.

6               MR. FOSCO: I don't think so.

7               MR. GIORDANO: He didn't say they wouldn't,  
8       that's not what he said. What's your question? I mean,  
9       that's not what he said.

10              MR. FOSCO: I think it was, Pat. He just  
11       testified here he doesn't know what they're doing and  
12       then in his testimony he says he believes they will do  
13       something different and they will require direct load  
14       control technology.

15       BY MR. FOSCO:

16       Q. Let me ask it this way --

17              MR. GIORDANO: May request. The word is may  
18       request.

19       BY MR. FOSCO:

20       Q. Is this just speculation on your part?

21       A. PJM rules are constantly evolving, right? I  
22       think we can all agree to that. The demand response

1 market is constantly evolving. I am not aware -- PJM  
2 has no rules that I'm aware of and there's 2500 pages  
3 and their manuals are probably another 2500 pages. I  
4 believe that PJM is moving towards tightening the rules  
5 on demand response, not loosening them, and that's  
6 evident in our business every day.

7 Q. I'm sorry. Are you --

8 A. I don't -- they have no rules right now governing  
9 a residential program without direct load control. Will  
10 they get there? I believe they will.

11 Q. There's not a single document that you pointed us  
12 to, correct, that shows that PJM was contemplating this  
13 specific action that you said you believe may occur?

14 A. I could give you lots of documents that show that  
15 they're tightening the rules on demand response. I  
16 think -- PJM operates in a world where they need to  
17 ensure reliability and that's the justification they  
18 give us for tightening the demand response rules. I  
19 just don't see -- they might give it a try, but I see  
20 them tightening the rules on residential programs as  
21 well.

22 Q. When will this happen, ten years, five years, one

1 year?

2 A. PJM has a way of getting things accomplished very  
3 quickly when they want to. I don't know. I don't know  
4 what their plan is. I don't have that vision inside of  
5 PJM.

6 Q. Nothing pending, correct, nothing pending at  
7 PJM --

8 A. Lot of rules tightening at PJM. Nothing  
9 specifically on residential programs right at this  
10 second.

11 Q. Have you ever personally participated in or  
12 oversaw a capacity bid in a PJM capacity market?

13 A. What do you mean by oversaw?

14 Q. I mean have you been directly responsible for  
15 making a bid in a PJM capacity market?

16 A. I've participated in the thought process around  
17 it, but never an ultimate decision maker about what goes  
18 in.

19 Q. You also testified that -- page 9, lines 18 to  
20 19, that PJM will in your opinion severely discount the  
21 amount of load offered in by ComEd without direct load  
22 control. Do you see that?



1       A.   I do.

2       Q.   Is it your testimony that PJM has a history of  
3   discounting bids in any kind of capacity market?  Have  
4   you ever seen that?

5       A.   What I mean by that is if ComEd had 100,000  
6   customers in their PTR program, just for round numbers,  
7   that bid could achieve with direct load control I  
8   think -- 100 megawatts let's say.  I don't think PJM  
9   would let 100 megawatts of PTR without direct load  
10  control into the market.  That's what I mean by severely  
11  discount.  With direct load control I think you get 100  
12  megawatts.  Without direct load control --

13      Q.   By discount you mean prevent?

14               MR. GIORDANO:  Let him finish the answer.

15               MR. FOSCO:  I'm sorry.

16               THE WITNESS:  Without direct load control, I  
17  think it would drastically something significantly less  
18  than 100 megawatts.

19  BY MR. FOSCO:

20      Q.   This is your opinion, you haven't seen PJM do  
21  this, correct?

22      A.   PJM has not addressed this formally.

1 Q. Are you aware of any specific instance where PJM  
2 has discounted, as you use that term, a capacity bid?

3 A. I'm not -- I have not.

4 Q. If you can refer to page ten of your testimony.  
5 At line 16 through 26, you indicate that another issue  
6 you have with ComEd's cost study is that according to  
7 you, you state that ComEd assumes that 4 percent of  
8 customers who have AMI deployed in the first year will  
9 enroll in the PTR program. After that, the scenarios  
10 assume the PTR program attracts only half a percent or  
11 1 percent of the customers with AMI meters annually. Do  
12 you see that?

13 A. I do.

14 Q. Would you agree that's an incorrect reading and  
15 characterization of what the cost benefit model does?

16 A. No. I think we just discussed that, didn't we?

17 Q. We'll walk through it now.

18 A. Okay.

19 Q. Can you refer to page nine of your work papers?

20 A. Okay.

21 Q. You see row eleven -- actually I take it back,  
22 row 12 is the PTR participation rate, correct?

1       A.   Yes.

2       Q.   This particular page starts off with 2023, but  
3   starts at 9 percent and goes to 9.5 percent, 10 percent,  
4   10.5.   Do you see that?

5       A.   I do.

6       Q.   Those aren't just 5 percent -- it's not applying  
7   for 4 percent plus just 5 percent.   The model is  
8   actually using the sum number of each half percent from  
9   each year plus 4 percent to start, correct?

10      A.   Yes.   I don't think that's what I -- I don't  
11   think I characterize it otherwise.

12      Q.   Well, didn't you just say that they were only  
13   adding half a percent per year or meaning this half  
14   percent scenario?

15      A.   Yes.

16      Q.   Didn't you say they were only adding half a  
17   percent of the new eligible meters instead of for year  
18   2025 10 percent of all meters that are eligible?

19      A.   Correct.

20      Q.   So it doesn't do what you said in your testimony,  
21   correct?

22      A.   I think it does do what I said.   It adds half a

1     percent every year.

2           Q.   It has --

3           A.   It goes from 9.5 to 10 percent.

4           Q.   Right.  And your testimony was that it only  
5     applied a half percent to the new customers for that  
6     year, right?

7                   MR. GIORDANO:  Objection.  I -- where do you  
8     see that in his testimony?

9                   MR. FOSCO:  Page ten, Pat, lines 20 to 23.

10                  MR. GIORDANO:  I think your disputing  
11     something where there's no dispute.

12     BY MR. FOSCO:

13           Q.   You state, do you not, Mr. Lacey, that the  
14     scenarios assume that PTR attracts only 25 percent or  
15     only 1 percent of the total new customers available that  
16     year, correct?  That's what you testified to.

17                  MR. GIORDANO:  There's no -- it doesn't say  
18     new customers.

19                  THE WITNESS:  I mean, I see growth rates 9,  
20     9.5, 10, 10.5, 11, 11.5.

21                  MR. GIORDANO:  If would be helpful -- he's  
22     not disputing this.  He's saying that that's what it is.

1 I don't know why we're fighting over it.

2 BY MR. FOSCO:

3 Q. It's not -- so you're -- I guess I don't get --

4 MR. GIORDANO: He's accepting the growth

5 rates that you had in the ComEd cost benefit analysis.

6 He's not trying to dispute that. He's saying that maybe

7 they were too low, but he's accepting them for purposes

8 of this analysis.

9 BY MR. FOSCO:

10 Q. Let me refer to the rest of your testimony. In

11 the next line you say if ComEd believes that 4 percent

12 of the customers will enroll in PTR the first year,

13 there seems to be no basis for assuming that less than

14 4 percent of the customers would enroll in the next

15 year, as the AMI network is rolled out to another area.

16 Aren't you talking about new customers there?

17 A. I'm talking about customers being deployed on

18 AMI.

19 Q. Right. And aren't you saying that only half a

20 percent of those will be added each year, isn't that

21 what you testified to here?

22 A. That's -- oh, I see --

1 Q. Actually ComEd applies 10 percent to all those  
2 new customers, correct?

3 A. Oh, I -- okay. I now understand what you're  
4 saying. You're right, I might be mistaken on that. I  
5 misinterpreted that spreadsheet.

6 Q. Thank you.

7 A. You're welcome. But I didn't make any cost  
8 calculation based on that anyway.

9 Q. You left it the way ComEd had it?

10 A. I left it the way ComEd had it, so there were no  
11 changes.

12 Q. Now, you removed that criticism that you --

13 A. Yes, based on this quick review, I would remove  
14 that criticism.

15 MR. FOSCO: If I could just have one minute,  
16 your Honor.

17 BY MR. FOSCO:

18 Q. Converge offers programs similar to that which  
19 ComEd is proposing to offer here, is that correct, I  
20 mean excluding the direct load control technology?

21 MR. GIORDANO: Oh, you're offering it now?  
22 That's awesome.

1 BY MR. FOSCO:

2 Q. Comverge offers demand response programs,  
3 correct?

4 A. We offer demand response programs and dynamic  
5 pricing response programs. Yes.

6 Q. Part of your business was offering those programs  
7 is sort of a turnkey service, correct, where Comverge  
8 handles all the programs?

9 A. Yes. But I might clarify -- in a second. Let me  
10 see where you're going. I'll make sure the record's  
11 clear.

12 Q. For programs with direct load control technology,  
13 what is average all-end price per kilowatt that Comverge  
14 offers such programs?

15 A. I can't say.

16 Q. You're not involved in making those decisions, as  
17 to whether Comverge -- whether it makes those kind of  
18 offers, is that not in your area?

19 A. It is not.

20 Q. You're not even -- you're not familiar with even  
21 the typical all end cost that Comverge offers for a  
22 demand response program?

1       A. I believe I testified in the AMI proceeding that  
2       it was \$150. Those numbers were given to me by a  
3       finance group. I don't remember exactly what they were.

4       Q. That would be on a per kilowatt year basis with  
5       the number you just gave?

6       A. It would be a customer basis which is close to  
7       per kilowatt basis. But that -- that's not per kilowatt  
8       year, that's an installed cost.

9       Q. Is one of the products that Comverge offers  
10      providing such services on a per kilowatt year basis?

11               MR. GIORDANO: Objection. This line --  
12      maybe I should have objected before. It's beyond the  
13      scope of the witness's testimony.

14               MR. FOSCO: He's got background questions on  
15      Comverge, is a leading providing --

16               JUDGE HAYNES: Overruled.

17               THE WITNESS: Can you repeat the question?  
18      Sorry.

19      BY MR. FOSCO:

20      Q. Does Comverge offer these services on a per  
21      kilowatt year basis to any of its customers?

22      A. I think this is where I was getting to the



1 definition of turnkey. And if you don't mind, I'm going  
2 to speak in megawatts because that's what I'm more  
3 familiar with. We have programs where we will provide  
4 to a customer 50 megawatts of load reduction and we take  
5 that obligation and we solicit customers and we install  
6 the devices and we get paid on a per kilowatt year. So  
7 I don't know exactly -- or per megawatt year. Sorry.

8 Q. You can just divide by a thousand kilowatts,  
9 right?

10 A. Right. So we get paid by the megawatts that we  
11 deliver during that year and those can be multiyear  
12 contracts. So per megawatt year, yes, we get paid that  
13 way. We also just deployed demand response assets and  
14 we get paid on a per unit. So we have programs where we  
15 would just install the direct load control program. We  
16 would sell and install the direct load control equipment  
17 and we might get paid on a per unit basis, per  
18 installation basis. So we really run -- and we do have  
19 what we call turnkey programs, which is where we solicit  
20 customers, install at the customer site, but it's not a  
21 pay per performance, per se. It's pay for assets  
22 delivered to the market.

1 MR. FOSCO: Thank you. We have no further  
2 questions.

3 JUDGE HAYNES: Redirect.

4 MR. FEELEY: We have no questions.

5 MR. GIORDANO: Could we have some time to  
6 talk?

7 JUDGE HAYNES: Yes. How long?

8 MR. GIORDANO: Lunch would be good.

9 JUDGE HAYNES: Let's take -- is five minutes  
10 enough?

11 MR. GIORDANO: Yes, five minutes is good.  
12 It's a short lunch.

13 JUDGE HAYNES: We'll still get lunch.

14 (Recess.)

15 JUDGE HAYNES: Go back on the record. Do  
16 you have redirect for your witness?

17 MR. GIORDANO: Yes, a few questions.

18 REDIRECT EXAMINATION

19 BY MR. GIORDANO:

20 Q. Mr. Lacey, you were asked several questions about  
21 your work papers and the model and how you utilized  
22 ComEd's cost benefit analysis. Can you just summarize

1     what you did in your work papers so that the record is  
2     clear on this issue?

3     A.   Yes.   ComEd made two assumptions that -- one  
4     assumption that I changed in half the scenarios.   So in  
5     some scenarios ComEd assumed -- the load drop went from  
6     20 to 40 percent, so an incremental reduction of 20  
7     percent.   I did not change those scenarios.   In half of  
8     their other scenarios they assumed -- the load drop went  
9     from 10 percent in that technology to 20 percent with  
10    control technology.   I changed that scenario because I  
11    believe it is way understated as we discussed.   So I  
12    changed that scenario to be a 30-percent incremental  
13    load drop.   I changed one assumption and half their  
14    scenarios and that results in all of the scenarios be  
15    that benefit.

16    Q.   You only changed one assumption, you accepted all  
17    other assumptions with respect to cost and peak  
18    reductions in the ComEd cost benefit study, is that  
19    right?

20    A.   Yes.   Everything was accepted except for that one  
21    assumption.

22    Q.   You were also asked several questions about PJM

1 potentially discounting capacity bid in from a PTR  
2 program without direct load control. Could you explain  
3 why you believe that PJM might, to use your words,  
4 discount the amount of capacity bid into the capacity  
5 market?

6 A. Yes. The capacity market is an emergency market,  
7 it's called informally the emergency load response  
8 program. Comverge has put CNI customers and residential  
9 customers, all the residential customers that we have in  
10 the market are direct load control customers. If we  
11 communicate with a CNI customer, PJM can be certain that  
12 there's someone on the receiving end of the phone at the  
13 commercial industrial customer. In an emergency  
14 situation, PJM cannot be certain that 100,000 residents  
15 are sitting at their home waiting to modify their  
16 thermostat on a two-hours notice, which is the notice  
17 window in the PJM protocols. That why I think if ComEd  
18 were to offer all of its capability into -- all of its  
19 load drop capability into the market without enabling  
20 technology, PJM would discount that significantly.

21 Q. If PJM did not discount that amount of  
22 capability, that amount of bid in by ComEd, what would

1     happen if ComEd was not able to realize the amount of  
2     capacity that they had bid into the market?

3                 MR. FOSCO:   Your Honor, I'm going to object.  
4     I think that goes beyond the scope of direct, now on a  
5     second level of questioning that was not part of any  
6     cross examination.

7                 MR. GIORDANO:  I don't think it is because I  
8     think it's the flip side of the same coin.  I mean, if  
9     you understand the discounting, it's important to also  
10    understand what happens if there is no discounting by  
11    PJM, what happens in that situation.  I think it's  
12    clearly within the scope of the cross examination.

13                JUDGE HAYNES:  Overruled.  You may answer.

14                THE WITNESS:  There are a couple of things  
15    and I think I've addressed them a little bit in my  
16    testimony.  For one, if the load drop didn't  
17    materialize, if the load wasn't there, ComEd would not  
18    be fully compensated for what they had offered in, so  
19    that put ratepayers at financial risk.  They would get  
20    less than what would otherwise be available had they  
21    fully performed.  The other issue of course which is  
22    much more important and that's a reliability issue.

1 It's an emergency load response program and PJM really  
2 doesn't care about the ComEd PTR program or Converge.  
3 PTM cares about the liability and so they call it and I  
4 think Mr. Eber even testified to this, when there's a  
5 system emergency, when the generating capacity is not  
6 available to meet load, if it doesn't show up, you have  
7 a reliability problem, so two things.

8 MR. GIORDANO: Nothing further from us.

9 MR. FOSCO: Recross, your Honor.

10 MR. FEELEY: I also have some recross, so if  
11 you want to go first.

12 MR. FOSCO: Sure, I'll go first.

13 RECROSS EXAMINATION

14 BY MR. FOSCO:

15 Q. There are other providers in the marketplace that  
16 allow customers to communicate with their home  
17 thermostat other than the linked direct load control  
18 program, correct?

19 MR. GIORDANO: Objection. Beyond the scope.  
20 I don't recall --

21 MR. FOSCO: No, it's not.

22 MR. GIORDANO: I don't recall what he said

1 about that.

2 MR. FOSCO: He testified that customers  
3 wouldn't be at home and there would be no way for them  
4 to turn down their thermostats.

5 JUDGE HAYNES: All right, let him answer.  
6 I'll withdraw the objection.

7 MR. FOSCO: That's what he testified to.

8 THE WITNESS: Could you repeat the question?

9 BY MR. FOSCO:

10 Q. There are other products in the marketplace that  
11 allow customers to control their thermostats remotely  
12 that are not part of a direct load control program  
13 that's bundled with the program, correct?

14 A. I think there are thermostats that can be  
15 controlled remotely, yes.

16 Q. A lot of people have smart phones today, correct?

17 A. Yes.

18 Q. A lot of people can link their home to their  
19 smart phone, correct?

20 A. Correct.

21 Q. You were talking about in response to redirect to  
22 Mr. Giordano about capacity -- about PJM, their

1 treatment of capacity bids and how that affects  
2 reliability and other factors. Do you recall that?

3 A. I do.

4 Q. Isn't it true that most bids that don't perform  
5 at 100 percent of the bidding in amount, that there's  
6 all these variances of capacity?

7 A. Yes. I think the generators variances, demand  
8 response variances, but as a portfolio they perform.

9 Q. But not at 100 percent, correct, there are  
10 routine variances in the marketplace, correct?

11 A. I think as a portfolio the market performs and  
12 that's why PJM can do what it does.

13 Q. Do generators always deliver 100 percent of their  
14 capacity obligation, to your knowledge?

15 A. No, which is what causes system emergencies,  
16 which makes demand response so much more important.

17 Q. Does PJM measure compliance at a portfolio level  
18 or a single customer level?

19 A. Portfolio level.

20 Q. From that perspective, as long the standard is  
21 met on average, the fact that a particular program is a  
22 little bit above or a little bit below doesn't affect



1 the overall performance, correct?

2 A. That's exactly right. I think my point was that  
3 if again, go back to the 100,000 customer example. If  
4 ComEd's 100,000 customers on direct load control they  
5 could bid in 100 megawatts roughly, without direct load  
6 control they would be way less than 100 megawatts.

7 Q. Referring to the Faruqui study, there were a lot  
8 of programs reported in that study that were without  
9 direct load control that were operating in market,  
10 correct?

11 A. I don't recall where his utilities were, off the  
12 top of my head. So when you say operating in market,  
13 certainly operating utilities, but I don't know if  
14 they're PJM utilities.

15 Q. Utilities delivering load response, there  
16 were -- well, you were here for Dr. Miyaji's cross,  
17 correct?

18 A. I was, yes.

19 Q. And he identified there were a number of  
20 categories identified in the Faruqui study that did not  
21 have enabling technology, correct?

22 A. Yes.

1           Q. I think you testified that some of those were in  
2 the PJM, correct?

3           MR. GIORDANO: Objection. This is all  
4 beyond the scope of the redirect. I mean, the questions  
5 were related to bidding the capacity into PJM market,  
6 not whether these programs exist. None of those  
7 programs bid any capacity into the PJM market or any  
8 other markets, so it's clearly beyond the scope.

9           MR. FOSCO: No, it's not, your Honor. On  
10 redirect he brought up that there's no -- he doesn't  
11 think these programs would be out there. There's  
12 evidence that there is. That's all I'm bringing out  
13 on --

14          MR. GIORDANO: It wasn't whether they're out  
15 there or not, it's whether or not they can effectively  
16 bid capacity in the PJM. Those programs have not been  
17 capacity in the PJM or anywhere else and it's clearly  
18 beyond the scope.

19          JUDGE HAYNES: Overruled.

20          THE WITNESS: That means I answer?

21          JUDGE HAYNES: Yes.

22          THE WITNESS: I don't think you

1 characterized Dr. Miyaji's testimony correctly. I don't  
2 think he said the Faruqui studies were bid into the PJM  
3 auction. I think he said one of our customers bid their  
4 assets into the PJM auction, okay. Faruqui cites a lot  
5 of the different programs that are -- I know a lot of  
6 them are not in PJM. But I don't have a list in front  
7 me so I can't tell you if some of them are in PJM. So  
8 if they bid into PJM's capacity market, I don't know and  
9 don't think Dr. Faruqui mentioned bidding any of those  
10 into the capacity markets. I don't think that was the  
11 purpose of his study. I think he was showing what these  
12 programs achieved, not whether or not they were bid in  
13 as a reliability asset. I think that's the core  
14 question. You guys -- ComEd is proposing a reliability  
15 assets and we're just suggesting that it's much more  
16 reliable, it would be much better received by the  
17 reliability operator with direct load control than  
18 without direct load control.

19 MR. FOSCO: No further questions, your  
20 Honor.

21 JUDGE HAYNES: Staff?

22 MR. FEELEY: A recross question for you.

1

RECROSS EXAMINATION

2

BY MR. FEELEY:

3

Q. On redirect you talked about some of the

4

assumptions that you changed or one assumption that you

5

changed.

6

A. Yes.

7

Q. I believe you said that you changed the

8

assumption to a 30 percent increase in the 10 percent

9

models?

10

A. That's correct.

11

Q. Is that actually a 300 percent increase in the

12

load drop to 40 percent total load drop?

13

A. That's a 30 percent incremental load drop.

14

Q. Then overall it ended up being a 300 percent

15

increase?

16

A. I want to be careful how I answer that, because

17

that can be taken wildly out of context. It assumes

18

load drop without PTR today is 10 percent. With PTR it

19

would be 30 percent. So if you put numbers around it,

20

it goes up. Again the 100,000 customers example

21

with -- so that would be roughly 100 megawatts. Without

22

direct load control you can get ten megawatts out of

1     that program. With direct load control this  
2     conservative assumption says you can get 30 megawatts.  
3     So ten to 30 is --

4           Q. But overall, wouldn't that be a 300-percent  
5     increase in the load drop?

6           A. Percentages are tricky. I mean, it's going from  
7     10 percent to 30 percent. I don't -- is that clear?

8           Q. That's fine. Thank you.

9                   MR. GIORDANO: No questions.

10                   JUDGE HAYNES: Okay, thank you. Before we  
11     take lunch, I think all Converge exhibits are in, but  
12     ComEd has two cross exhibits that I wasn't sure they're  
13     moving into the record. One and two are in, but I'm not  
14     sure about three.

15                   MR. FOSCO: We are not moving those, your  
16     Honor. We're going to withdraw.

17                   JUDGE HAYNES: Okay. Lunch, how long? If  
18     the afternoon is as poorly estimated as the morning or  
19     --

20                   MR. FOSCO: Your Honor, we expect no time  
21     for Dr. Kennedy. Fifteen minutes.

22                   MR. GIORDANO: I think our estimates will be

1 pretty accurate.

2 MR. GHOSHEL: Your Honor, CUB also expects  
3 no cross for Dr. Kennedy.

4 JUDGE HAYNES: So how about 1:15?

5 (Lunch recess.)

6 JUDGE HAYNES: Let's go on the record.

7 CUB, would you like to call your next  
8 witness?

9 MR. GHOSHEL: Yes, your Honor. We call Miss  
10 Rebecca Devens to the stand.

11 JUDGE HAYNES: Good afternoon. Please raise  
12 your right hand. Do you solemnly swear to tell the  
13 truth, the whole truth, and nothing but the truth?

14 THE WITNESS: I do.

15 JUDGE HAYNES: Thank you.

16 DIRECT EXAMINATION

17 BY MR. GHOSHEL:

18 Q. Please state your full name and address, for the  
19 record.

20 A. Rebecca Devens, 309 West Washington, Suite 800,  
21 Chicago, Illinois 60606.

22 Q. Who is your employer?

1       A.   The Citizens Utility Board.

2       Q.   On whose behalf are you testifying today?

3       A.   On behalf of the Citizens Utility Board and the  
4   City of Chicago.

5       Q.   Do you have before you documents that have been  
6   previously marked as CUB city exhibits 1.0 revised, 1.1  
7   revised, 1.2, 2.0 revised and 2.1 revised?

8       A.   Yes.

9       Q.   Do these documents appear to be true and accurate  
10   representations of the direct and rebuttal testimony you  
11   prepared for this proceeding?

12      A.   Yes.

13      Q.   Besides the changes reflected in the clean  
14   versions of the revised exhibits, do you have any  
15   corrections or changes to make to these documents?

16      A.   No.

17      Q.   If you were asked the same questions that are  
18   asked in Exhibits 1.0 revised and Exhibit 2.0 revised,  
19   would your answers be the same today?

20      A.   Yes.

21               MR. GHOSHEL:  Your Honor, pending cross  
22   examination, CUB moves for the admission of Exhibit 1.0

1 revised, 1.1 revised, 1.2., 2.0 revised, and 2.1 revised  
2 into the record.

3 JUDGE HAYNES: Were these filed on eDocket?

4 MR. GHOSHEL: They were.

5 JUDGE HAYNES: And the revised were filed on  
6 eDocket?

7 MR. GHOSHEL: Yesterday, December 6th, 2012.

8 JUDGE HAYNES: Thank you. Are there any  
9 objections?

10 MS. PALMER: No, your Honor.

11 JUDGE HAYNES: Staff, you have --

12 MS. PALMER: Good afternoon. I'm Angelique  
13 Palmer, I represent staff. Just a few questions for  
14 you.

15 CROSS EXAMINATION

16 BY MS. PALMER:

17 Q. In your testimony you're a policy analysis, is  
18 that correct?

19 A. Yes.

20 Q. You have a degree in English from the University  
21 of Illinois?

22 A. Yes.



1 Q. On page three, line 34 of your direct, you  
2 testified that you're not an attorney, is that correct?

3 A. Yes.

4 Q. Are you an economist?

5 A. No.

6 Q. My question -- the remainder of my questions are  
7 going to be focusing on your rebuttal testimony. If you  
8 go to those documents, that's easier. Take a look at  
9 page four, lines 51 through 52. Looking in particular  
10 at the statement that starts with your references to  
11 benefit and offer an additional PTR -- you're at the  
12 same place? You state benefits of offering additional  
13 PTR events include both lowering electricity prices by  
14 reducing demand for electricity at peak time, end quote.  
15 Do you recall that statement?

16 A. Yes.

17 Q. Are you aware of the concept of price electricity  
18 demand?

19 A. Yes.

20 Q. What's your understanding of that?

21 A. I believe that it's in regard to how demand  
22 function fluctuates and responds to price of

1 electricity.

2 Q. Moving on to page four, lines 62 to 63. You  
3 state and I quote, this is not the same thing as stating  
4 that two to three events are optimal or the most cost  
5 beneficial number of curtailment period, closed quotes.  
6 With respect to that particular statement, do you know  
7 of any studies that determine the optimal number of  
8 events to reinforce behavior?

9 A. I do not.

10 Q. Again it's the same statement there. Are you  
11 implying that more events will be cost beneficial to  
12 customers?

13 A. I believe that the percent -- program is more  
14 complete and there have not been many state programs  
15 nationally, but there's not a lot of that to demonstrate  
16 what the optimal number should be or would be.

17 Q. I'm going to restate the question. Are you  
18 implying based on your statement that we previously  
19 mentioned that more events will be more cost beneficial  
20 to customers?

21 A. Yes.

22 Q. Do you agree that on any time in an event when

1 one is called that it's likely to require time and  
2 effort on the part of the PTR customer to reduce that  
3 load?

4 A. I'm sorry. Can you repeat the question?

5 Q. Not a problem. Do you agree that any time an  
6 event called that is likely to require time and effort  
7 on the part of the PTR customer to reduce that load?

8 A. I think that's variable. It depends on the  
9 customer.

10 Q. But some degree of effort is required, is it not?

11 A. Yes, there could be.

12 Q. And does the time and effort have a cost to the  
13 PTR customer?

14 A. It depends on the circumstances, but usually not.

15 Q. You say usually not, what circumstances do you  
16 have in mind?

17 A. If that customer has opted to purchase direct  
18 load control technology.

19 Q. The cost would be just the actual purchase of it,  
20 if I understand your response?

21 A. Yes.

22 Q. Suppose you have a PTR program that has only one

1 participant and that ComEd receives \$100 from PJM to  
2 offer those rebates to that particular participant, I'd  
3 like you to consider two scenarios. First being when  
4 you have one event and the customer is called to reduce  
5 loads of 10 kilowatt hours, they receive a \$10 credit on  
6 the bill for the usage period and at the end of the year  
7 they receive a \$9 credit as the first scenario. My  
8 second would be you have ten events where the customer  
9 saves 10 kilowatt hours on each event and received \$100  
10 in total credit. You got that --

11 A. Yes.

12 Q. My question is this. Do you agree that under  
13 either of those scenarios the customers save \$100 or  
14 they get a credit of \$100?

15 A. I think it depends on how you define credit. In  
16 both scenarios customers receive \$100 for reducing  
17 their --

18 Q. That's a yes, they at least receive a \$100  
19 benefit?

20 A. Sure.

21 Q. Do you agree that the first scenario, the one  
22 involving only one event is likely to have less cost to

1 the customer?

2 A. No. I don't agree with that.

3 Q. Explain your basis for the response?

4 A. Well, depending on how you're defining costs, if  
5 you're just defining a customer spending money to reduce  
6 usage in the program at no cost in terms of customer  
7 effort, I don't think there's necessarily a greater  
8 costs for customers to participate more times or reduce  
9 usage more times.

10 Q. Let me re-ask my question. Going again as to the  
11 first scenario, do you agree with respect to customer  
12 efforts, that it would require more effort or less?

13 A. So you're asking if it would require more effort  
14 to reduce usage?

15 Q. Yes, if you only have one event versus the ten.

16 A. Yes. It would -- it may require more effort to,  
17 you know, probably require the same amount or similar  
18 amount of effort each time the customer responded to an  
19 event.

20 Q. And again when you have one event versus ten with  
21 the same facts we've already stated, is it your opinion  
22 or is it in your opinion that it would require -- they

1 would get more of a benefit if they just had one event  
2 versus if they had ten events?

3 A. Can you restate the question?

4 Q. Sure. The earlier scenario you indicated one  
5 event, ten facts as to money and benefit being the same  
6 as well as time is at issue here. So my question is as  
7 to the money as to the benefit that they might receive.  
8 With the first event, in your opinion do they receive  
9 more of a benefit in comparison to having to do ten  
10 events to receive that hundred dollar credit?

11 A. No. I don't believe that they receive more  
12 benefit.

13 Q. On page five through six, lines 90 to 93, you  
14 discuss how customers may become angered or confused by  
15 the uncertainty about the actual amount of the rebate.  
16 With respect to that statement, is it possible for  
17 customers to become angry about the program if that  
18 customer learns that the only reason to call an event is  
19 to test whether they're going to respond?

20 A. You're asking whether the customer would become  
21 angry if they learned that they're responding to a test  
22 event?

1       Q. Right. Only for the purpose of testing their  
2 behavior?

3       A. No. I do not believe a customer would become  
4 angry about that.

5       Q. The same area, pages five through six, lines 90  
6 to 93 again. You discussed how the certainty in the  
7 rebate amount can lead to angering or confusing repeat  
8 customers and discouraging further participation.  
9 Specifically, you say that this anger and confusion may  
10 occur, and I quote, if these repeated customers believe  
11 they may receive more than a dollar per kilowatt hour  
12 rebate, in parentheses it also says based on the  
13 previous year's rebate and then do not receive that  
14 amount. Do you see that statement?

15       A. Yes.

16       Q. Are you aware of the proposed tariff language  
17 that states, quote, however, the company must make all  
18 reasonable efforts to designate a number of curtailment  
19 periods in any given year that serve to minimize an  
20 absolute value of such accruals from such year to  
21 subsequent years, closed quote?

22       A. Yes.

1       Q.   Given that the tariff states that the company  
2       must make all reasonable effort to designate a number of  
3       curtailment period to minimize accrual, is it possible  
4       that the number of curtailment period could increase  
5       over time as the amount of money received through PJM  
6       markets increases over time?

7       A.   Yes.   That's seems like a possibility.

8       Q.   Is it also possible that increasing the number of  
9       events called could lead to angering or confusing of  
10      repeat customers if these customers believe that the  
11      amount of work they have to do increases?

12      A.   I don't believe so.   I think customers would  
13      agree to -- increase in opportunities to have to save  
14      money in the program and earn --

15      Q.   Looking at Dr. Kennedy's proposal, I believe  
16      you've taken a look at that record, is that correct?

17      A.   Yes.

18      Q.   Could the knowledge of the dollar per kilowatt  
19      hour as being a minimal credit with the possibility of a  
20      larger credit thereafter encourage customers to have  
21      greater reductions in demands?

22      A.   Is it possible?   Yes.



1 MS. PALMER: Could I just have a moment,  
2 please.

3 Just one more question.

4 BY MS. PALMER

5 Q. Earlier you brought up the term direct load  
6 control, do you remember that?

7 A. Yes.

8 Q. Do you believe that direct load control has a  
9 cost?

10 A. Yes.

11 MS. PALMER: That's all I have. Thank you.

12 JUDGE HAYNES: Thank you.

13 Redirect?

14 MR. GHOSHEL: Could we have a moment, your  
15 Honor?

16 JUDGE HAYNES: Yes.

17 MR. GHOSHEL: CUB has no redirect, your  
18 Honor.

19 JUDGE HAYNES: Thank you.

20 Mr. Kennedy.

21 MR. FEELEY: Before we put Dr. Kennedy on,  
22 can I put in the testimony for the witnesses, staff for

1     which there's no cross.

2                   JUDGE HAYNES:   Yes.   Go ahead.

3                   MR. FEELEY:   Staff would move to admit no  
4     evidence ICC staff Exhibit 2.0 with attachments A, B,  
5     and C, the direct testimony of Alicia Allen that was  
6     filed on eDocket on October 25th and also Ms. Allen's  
7     prepared affidavit that was filed on eDocket yesterday,  
8     that's marked for identification as staff Exhibit 2.1.  
9     In addition, staff would move to admit into evidence of  
10    Horstin Clawson(phonetic), marked for identification as  
11    staff Exhibit No. 3.0, it was filed on eDocket on  
12    November 15 and Mr. Clawson prepared an affidavit that's  
13    been filed on eDocket, filed yesterday, December 6th,  
14    and it's marked for identification as staff Exhibit 3.1.

15                  JUDGE HAYNES:   Any objection?   Hearing none,  
16    staff exhibit 2.0 with attachment A, B, and C, staff  
17    Exhibit 2.1, staff Exhibit 3, and staff Exhibit 3.1 as  
18    previously filed on eDocket are admitted into the  
19    record.

20                  MR. FEELEY:   At this time staff would call  
21    its witness Dr. Kennedy.

22                  JUDGE HAYNES:   Good afternoon, Dr. Kennedy.

1 Please raise your right hand. Thank you. Do you  
2 solemnly swear to tell the truth, the whole truth, and  
3 nothing but the truth? Is your microphone on?

4 THE WITNESS: I'm sorry. I do.

5 JUDGE HAYNES: Thank you. Go ahead.

6 DIRECT EXAMINATION

7 BY MR. FEELEY:

8 Q. Could you please state your name, for the record?

9 A. Thomas E. Kennedy.

10 Q. By whom are you employed?

11 A. The Illinois Commerce Commission.

12 Q. Dr. Kennedy, do you have in front of you a  
13 document that's been marked for identification as the  
14 direct testimony of Dr. Thomas E. Kennedy, marked as  
15 staff Exhibit 1.0, it consists of eight pages of  
16 narrative text, there's no attachments and no schedules?

17 A. That is correct. Yes, I do.

18 Q. And Dr. Kennedy, do you also have in front of you  
19 a document that's been marked for identification as  
20 staff Exhibit 4.0 entitled rebuttal testimony of Dr.  
21 Thomas E. Kennedy, eight pages of narrative text and  
22 there's no attachment in those schedules?

1       A.   Yes.

2       Q.   Were both of those documents prepared by you and  
3   under your direction, supervision, and control?

4       A.   Yes.

5       Q.   Do you have any additions, deletions, or  
6   modifications to make either to staff Exhibit 1.0 or  
7   4.0?

8       A.   Yes, I do.   I have one minor correction on page  
9   three, line 50.

10      Q.   Which exhibit?

11      A.   I would like to delete the word limiting.

12      Q.   Is that in staff Exhibit 1.0?

13      A.   Yes.

14      Q.   I'm sorry.   Go on.

15      A.   That is the extent of my corrections.

16               JUDGE HAYNES:   Could you repeat the  
17   correction?

18               THE WITNESS:   On page three, line 50, it  
19   says three, I recommend prohibiting and then limiting  
20   was inadvertently left on there as well, and my  
21   correction is to delete the word limiting.

22               JUDGE HAYNES:   Thank you.

1 BY MR. FEELEY:

2 Q. Dr. Kennedy, if I were to ask you today the same  
3 series of questions set forth in staff Exhibit 1.0 and  
4 4.0, would your answers be the same?

5 A. Yes.

6 Q. Do you intend for that to be your sworn  
7 testimony, direct, rebuttal, in this proceeding?

8 A. Yes.

9 MR. FEELEY: At this time, staff would move  
10 to admit into evidence ICC staff exhibit 1.0, the direct  
11 testimony of Dr. Thomas E. Kennedy and 4.0 the rebuttal  
12 testimony of Dr. Thomas E. Kennedy.

13 JUDGE HAYNES: Any objection? Hearing none,  
14 those exhibits are admitted into evidence, for the  
15 record.

16 MR. FEELEY: Dr. Kennedy is available for  
17 cross examination.

18 JUDGE HAYNES: Who's going first?

19 MR. GIORDANO: I'm ready to go.

20 JUDGE HAYNES: Okay.

21 MR. GIORDANO: Can you see me over there,  
22 Dr. Kennedy.

1 THE WITNESS: No. I'd appreciate if you  
2 move over so we can see each other I guess.

3 MR. GIORDANO: You're sure you want to see  
4 me? Okay. Thanks John.

5 CROSS EXAMINATION

6 BY MR. GIORDANO:

7 Q. I'm going to refer you, Dr. Kennedy, to footnote  
8 two of your rebuttal testimony on page three, please?

9 A. Yes.

10 Q. You state there in the second line that the lower  
11 reduction experienced by customers on ComEd's AC cycling  
12 program is approximately .992 KW, isn't that correct?

13 A. Approximately, but yes.

14 Q. Good. That anticipates my next question.  
15 Because that's based, is it not, Dr. Kennedy, on  
16 Commonwealth Edison Company's response to staff data  
17 request number DAB 2.02?

18 A. Yes.

19 Q. I'd like to show you -- actually we submitted  
20 this yesterday to Mr. Feeley and requested that these  
21 cross exhibits be submitted to you a day early because  
22 of the cross examination to Springfield.

1                   MR. FEELEY: Brian Allen from our office has  
2 those documents so do you want -- direct him and he'll  
3 provide him because Dr. Kennedy --

4                   MR. GIORDANO: Oh, I see. Okay, thanks.  
5 This has been marked as Comverge cross Exhibit No. 1.

6                   JUDGE HAYNES: Thank you. And three copies  
7 to JUDGE HAYNES reporter.

8 BY MR. GIORDANO:

9           Q. This is the document on which you based your  
10 statement that the low reduction experienced by  
11 residential air-conditioning customers on ComEd's  
12 residential air-conditioning cycling direct load control  
13 program was .992 per KW, correct?

14           A. Yes.

15           Q. Would you agree, then, that a .9 per KW reduction  
16 is a conservative assumption for the amount of peak  
17 reductions by PTR participants whose air-conditioners  
18 are automatically cycled using direct load control  
19 technology during PTR events?

20           A. No.

21           Q. But this is the amount of reduction that was  
22 realized by customers on the direct load control

1 program, correct, of Commonwealth Edison, the  
2 air-conditioner cycling program, correct, .992, correct?

3 A. Yes.

4 Q. And isn't that amount higher, that .992 per  
5 kilowatt number is higher than .9 per KW number?

6 A. I think it's the same number, .992 in both of  
7 them, isn't it?

8 Q. Well, I used the number .9 in my question, yeah,  
9 it's really .92 is closer to one, is really rounded off  
10 would be 1.0 KW, right, which is higher than .9 per KW,  
11 correct?

12 A. Absolutely.

13 Q. You also understand that if direct load control  
14 was used in the PTR program, it would be used to  
15 automatically cycle air-conditioning load during PTR  
16 events, correct?

17 A. That's my understanding.

18 Q. That's also what's done currently, the automatic  
19 recycling -- automatic not recycling, but cycling of  
20 air-conditioning with direct load control devices in  
21 ComEd's air-conditioning cycling program, correct?

22 A. That's correct.



1 MR. GIORDANO: I'd like to move for the  
2 admission of Converge Exhibit 1.

3 JUDGE HAYNES: Is there any objections?

4 MR. FEELEY: Staff has no objection, it  
5 comes in the other response.

6 JUDGE HAYNES: Do you have an objection?

7 MR. FOSCO: To the admission?

8 JUDGE HAYNES: To the admission of cross  
9 Exhibit 1?

10 MR. FOSCO: No.

11 JUDGE HAYNES: Converge Cross Exhibit 1 is  
12 admitted into the record.

13 BY MR. GIORDANO:

14 Q. Now that we have fully analyzed this question,  
15 would you agree that a .9 per KW reduction is a  
16 reasonable assumption for the amount of peak reductions  
17 by PTR participants whose air-conditioners are  
18 automatically cycled using direct load control?

19 A. I'm not sure if the population is exactly the  
20 same, so I'm not sure.

21 Q. If you assume that the population would be ComEd  
22 customers with air-conditioning equipment that signed up

1 for the program, in both programs, that this would be a  
2 fair assumption, correct?

3 A. I just don't have -- I'm not sure. It's probably  
4 in the range of that.

5 Q. Thank you. Now I'd like to refer you to ComEd  
6 response to staff data request JZ 1.02, which I've  
7 marked as Comverge cross Kennedy Exhibit 2. I guess  
8 Mr. Allen could get you this as well or you already have  
9 it.

10 I'd like to refer you to -- there's a lot of  
11 questions here, but to part A of the request and part A  
12 of the response.

13 A. Okay.

14 Q. All right, thanks, Dr. Kennedy. Does this data  
15 response, ComEd data response to the staff data request,  
16 state that the average peak period load for ComEd  
17 residential customers was 2.15 KW in 2010, based on  
18 residential hourly load data from one p.m. through seven  
19 p.m. for non-holiday weekdays, from June 1st through  
20 August 31st, 2010?

21 A. Yes.

22 Q. Would you agree, then, if you take the 2.25 KW

1 average peak period load for ComEd residential  
2 customers, and you take the .9 per KW reasonable  
3 assumption or in the range of reasonable assumption for  
4 the amount of peak reductions by PTR participants whose  
5 air-conditionings are automatically cycled using direct  
6 load control during PTR events, that 40 percent would be  
7 a reasonable assumption of peak load reductions by PTR  
8 participants with direct load control?

9 A. I guess I don't have an opinion on that. I used  
10 this -- these numbers from ComEd for the purpose of  
11 getting an order of magnitude value for what payments  
12 customers might expect from a PTR program. I did not  
13 define what assumptions would necessarily be correct. I  
14 think you'd need to talk to ComEd witness Eber to answer  
15 these sorts of questions. I was using it to look at the  
16 issue of whether there was a competitive -- whether  
17 there was competitive neutrality.

18 Q. Right. But you're an expert in these matters and  
19 I thought you might be able to render an opinion on the  
20 issue of if you get a .9 per KW reduction from average  
21 from PTR participants and the -- during peak, and the  
22 average peak load for residential customers is 2.25,

1     that you'd get a 40-percent peak load reduction,  
2     correct?

3     A.   I -- the problem is I don't know -- there are a  
4     number of problems with this.  One that comes to mind,  
5     if you don't know that these air-conditioner customers  
6     are average customers.

7     Q.   But, Dr. Kennedy, it doesn't matter, correct,  
8     because if you get .9 kilowatt from those customers and  
9     the average on the whole system is 2.25, you're getting  
10    a 40-percent reduction for the system, correct?

11    A.   I do not have an opinion on exactly what  
12    reductions you would get underneath these things.  As I  
13    said, I use this number for the purpose of getting an  
14    order of -- a rough estimate of what the amount the  
15    customers might get back from PTR and that's independent  
16    of whether they have kind of a little control device or  
17    not.  It's just -- I just want to get a rough idea and  
18    maybe that might -- if they do have a load control  
19    device on them, this would be kind of an upper limit to  
20    the amount of money.

21                 MR. GIORDANO:  We'll move for the admission  
22    of Converge cross Exhibit 2.

1                   MR. FEELEY: Is that the end of your cross  
2 of Dr. Kennedy?

3                   MR. GIORDANO: No.

4                   MR. FEELEY: Can we hold off on Converge  
5 cross Exhibit 2.

6                   JUDGE HAYNES: Sure, we can.

7                   Did you have more cross?

8                   MR. GIORDANO: Yes.

9                   JUDGE HAYNES: Okay, go ahead.

10 BY MR. GIORDANO:

11       Q. Refer you to page four, line 75 to 77. You  
12 testified that you did not believe it's reasonable to  
13 spread the cost of direct load control devices and  
14 equipment to all ratepayers when the majority of  
15 benefits are direct benefits to PTR participants who use  
16 the devices, correct?

17       A. Yes.

18       Q. You testified page five, lines 87, 89, that what  
19 you call indirect benefits that will accrue to  
20 non-participant ratepayers from direct load control, are  
21 benefits such as lowered capacity prices, reduced carbon  
22 emissions, and avoided transmission and distribution

1 costs, correct?

2 A. Yes.

3 Q. Then you also go on to testify on page six, lines  
4 102 to 104, that it's entirely possible the total  
5 benefits to non-participants are less than the total  
6 cost to them, correct?

7 A. I'm sorry. The line --

8 Q. Page six, lines 102 to 104. Yes?

9 A. Yes.

10 Q. You have made no attempt to quantify what you  
11 call indirect benefits, such as lowered capacity prices,  
12 reduced carbon emissions and avoided transmission and  
13 distribution costs, correct?

14 A. No, I haven't. But I would point you to  
15 Dr. Garcia or Mr. Garcia's testimony, where he talks  
16 about how they had to throw in these types of benefits  
17 in order to make realtime pricing cost effective and he  
18 expressed concern about having any additional costs. So  
19 I guess I would say that these are not -- my -- my  
20 thought is that these are not very large things compared  
21 to the direct effect on the -- the spillover will tend  
22 to be relatively small. This is a big market. This

1 program isn't going to be very large, so the price  
2 effects would tend to be relative, very small, if  
3 measurable at all. And even those price effects tend to  
4 be price effects which is just equilibrium effect before  
5 the market has the chance to adjust.

6 MR. GIORDANO: With all due respect to Dr.  
7 Kennedy, I'd like to move to strike everything after  
8 "no, I haven't." The question was just simply whether  
9 he had made any attempt to quantify what he called  
10 indirect benefits.

11 JUDGE HAYNES: Denied.

12 BY MR. GIORDANO:

13 Q. Would you agree that these benefits to  
14 non-participants result in the reductions in ComEd's  
15 peak demand caused by the utilization of direct load  
16 control devices by PTR participants, these are the  
17 indirect benefits such as lower capacity prices, reduced  
18 carbon emissions, an avoided TME costs?

19 A. I would agree to that. But they don't get --  
20 it's only to the effect that this program lowers overall  
21 PJM market prices, for example, if they're getting any  
22 benefits and I think those are likely to be relatively

1 very small, if measurable at all.

2 Q. Well, are you aware that in ICC Docket No. 11  
3 0846 which investigated ComEd's realtime pricing rate,  
4 that ComEd witness Ahmad Faruqui testified that lowered  
5 capacity prices resulting from reduced peak demand by  
6 participating customers could result in as much as \$60  
7 million in net present value benefits to non  
8 participating customers?

9 MR. FEELEY: Objection. He hasn't laid a  
10 foundation yet of whether this witness is aware of that  
11 docket.

12 MR. GIORDANO: That's what I asked him.

13 MR. FEELEY: No, you asked the compound  
14 question.

15 MR. GIORDANO: I asked whether he was aware.

16 JUDGE HAYNES: Okay, break it up. Are you  
17 aware of the docket?

18 BY MR. GIORDANO:

19 Q. Are you aware of the ICC docket which  
20 investigated ComEd's realtime pricing rate?

21 A. I have some awareness of it.

22 Q. Are you aware that ComEd witness Ahmad Faruqui



1 testified that lowered capacity prices resulting from  
2 reduced peak demand by participating customers could  
3 result in as much as \$60 million in net present value  
4 benefits to nonparticipating customers?

5 MR. FEELEY: I guess I have an objection.  
6 If Mr. Giordano wanted to introduce that testimony into  
7 evidence, he could have done it through his own witness.  
8 This isn't my witness's testimony. So there's -- you  
9 know, there's no foundation for it.

10 MR. GIORDANO: But he's testifying about  
11 these indirect benefits to nonparticipating customers  
12 and he's testifying already that he thinks they might be  
13 low, and so I think it's totally appropriate to ask him  
14 a question about a ComEd testimony in another docket  
15 that he's aware of from an esteemed ComEd witness.

16 MR. FEELEY: But that witness isn't here  
17 today.

18 JUDGE HAYNES: Objection overruled. You may  
19 answer the question.

20 THE WITNESS: I'm aware he had an estimate,  
21 sixty million sounds about right. I don't recall the  
22 exact number. But my review of that analysis, I thought

1 it was very, shaky and speculative. I didn't -- I  
2 wouldn't put much reliance on those numbers. He put in  
3 national defense benefits and it was -- I thought it was  
4 not a very well done analysis.

5 BY MR. GIORDANO:

6 Q. But the sixty million I was referring to here was  
7 not -- didn't include the national benefits. I was  
8 referring just to the reduction in capacity prices.  
9 That he concluded that just the reduction in capacity  
10 prices could result in as much as \$60 million in net  
11 present value benefits?

12 A. I also thought that was incorrect because it was  
13 a short-term look at that and it didn't take into  
14 account the fact that the market would adjust to a drop  
15 in prices and capacity would increase more slowly as a  
16 result and use-up and force the price back up. So it  
17 will be a short-term savings and to apply that for the  
18 whole life of the project wasn't appropriate.

19 Q. All right. Well, let's move away from studies,  
20 then, and let's move towards the actual PJM capacity  
21 auction. Are you aware that the bidding of demand  
22 response capacity in the PJM's auction for the 2-12

1 to -13 period dropped capacity prices to \$6000 a  
2 megawatt year, when the capacity prices in the auction  
3 held for the prior year had been over \$40,000 a megawatt  
4 year?

5 A. I've heard talk about that. I'm not aware of any  
6 particular numbers.

7 Q. These numbers are in the record here?

8 A. Well, I don't have direct knowledge of those  
9 numbers.

10 Q. Right. And are you also aware that it was widely  
11 attributed that that substantial drop resulted from the  
12 bidding of demand response capacity into that auction?

13 A. Lots of things are attributed to global warming  
14 that probably should be attributed. I don't know if  
15 that -- I have no opinion on how accurate those  
16 attributions may be and how wide they were made.

17 Q. From PJM's own report on the 2012, 2013 RPM based  
18 residual auction results, they stated that the total  
19 quantity of demand resources offered into the 2012  
20 auction was 99,846.6 megawatts which represents an  
21 increase over a 496 percent over the demand resources  
22 that were offered into the 2011, 2012 auction.

1                   MR. FEELEY: Your Honor, is there a question  
2 for Dr. Kennedy?

3                   MR. GIORDANO: Yes.

4                   MR. FEELEY: I guess I object to Mr.  
5 Giordano just reading these documents into evidence.

6                   JUDGE HAYNES: You may lay a foundation that  
7 this witness -- you have to ask the question, where are  
8 you going with this, and I agree with staff.

9                   MR. GIORDANO: I didn't ask the question  
10 yet, but I'm going to ask it.

11 BY MR. GIORDANO:

12           Q. Are you familiar with the PJM auction and the  
13 reports that PJM gives with respect to the auction?

14           A. I haven't read any of the reports with respect to  
15 the auction. I'm aware they have an auction.

16           Q. Do you believe that the demand response, the  
17 bidding of demand response resources can have a  
18 substantial affect in lowering capacity prices?

19           A. They may have a short-run affect if the things  
20 you said there, they apparently do if those facts are  
21 correct. They did have an impact, they found a  
22 continual slow or lack of growth probably a big part of

1     that fact as well.

2           Q.   But the bottom line is you're not sure whether  
3   non-participants would benefit or not from this program,  
4   from direct load control devices, correct?

5           A.   Yes.   This program didn't drive -- the ComEd  
6   program wouldn't drive prices down like that.  That was  
7   the total affect of everything in the market.  The only  
8   impact that the non-participants would get would be the  
9   amount that's attributable directly to this PTR program,  
10   which would be a small fraction of the total affect  
11   that -- the short-term affect that you've shown us here.  
12   Their benefits would likely be relatively small.

13          Q.   Have you analyzed whether the PTR program would  
14   reduce peak loads in a manner which can effectively bid  
15   into PJM's capacity market if the program does not  
16   include direct load control devices?

17          A.   No.

18          Q.   Isn't it also true that the more demand response  
19   that you have bid into a market, it can knock out an  
20   incremental coal plan and automatically reduce the price  
21   in that market?

22          A.   It's an awful big market for one coal plant to

1 dramatically reduce the prices. You know, if everybody  
2 goes out and buys a gallon of milk, the price of milk  
3 would go up dramatically. But if I'm the only one that  
4 goes out and buys an extra gallon of milk, you're not  
5 going to see it in the market price.

6 Q. Right. So what that means is we have to make  
7 this program really effective so there's a lot of load  
8 reduction, correct?

9 A. No. It's saying that this -- we can do all the  
10 savings we want, it's not going to have a huge impact on  
11 a big market as PJM is.

12 Q. Okay. That's your speculation, correct, sir?

13 A. Based on 45 years as an economist?

14 Q. You've been at this longer than I have, and I  
15 will stipulate that that's a good thing. I appreciate  
16 that.

17 A. I don't think that's true, by the way, because  
18 the first time I was crossed, you crossed me and I don't  
19 know if either of us are any wiser, but we're sure a lot  
20 grayer though.

21 Q. Right. We're just a lot more experienced,  
22 whether it's wise I don't know. We're not smart enough

1     that we're not still doing this.

2           A.    Okay.

3           Q.    Well, I enjoyed that, Tom.  I don't know if  
4     anybody else did.  I think this is very -- let's see.  
5     Just a couple more and -- I do have a couple more,  
6     though.  You also testified that offering DLC technology  
7     to participants would lock in technology, correct, and  
8     that this would be objectionable, because if the  
9     commission required ComEd to bid capacity under PJM  
10    direct load control methodology, it would be requiring  
11    any customer who opts into the PTR program, to opt in to  
12    using direct load control technologies, correct?

13          A.    You want to give me the citation of that?

14          Q.    Yes, sure.  On page seven, staff exhibit 4.0.  
15    Yeah, here 137 through 140, lines 137 through 140.

16          A.    Okay, yes.

17          Q.    Isn't it true that ComEd could bid capacity into  
18    PJM from those PTR participants who opt in to direct  
19    load control technology under PJM's direct load control  
20    methodology and bid capacity from non DLC PTR  
21    participants under PJM's firm service level methodology?

22          A.    That might be possible.

1 Q. That would eliminate -- if that were possible, if  
2 that could be done, that would eliminate this problem of  
3 requiring any PTR participants to opt in to direct load  
4 control technology, correct?

5 A. It would. But it might strand some capital costs  
6 if those people -- if the customer moves or decides they  
7 don't want to be in the -- just don't want to deal with  
8 direct load control. Your witness earlier said, well,  
9 we'd normally cycle on 15-minute interval, a customer on  
10 15-minute intervals, but we need more capacity, we can  
11 get it by increasing from 30 minutes to something  
12 higher, basically increase from 30 minutes to a higher  
13 amount per hour to get a larger demand reduction and  
14 I think that could cause customers to rethink -- using  
15 these devices and dropping out of the program from under  
16 a device-driven program.

17 MR. GIORDANO: I have to object, move to  
18 strike. It wasn't responsive to the question. I mean,  
19 it may have been an intelligent comment, Dr. Kennedy,  
20 but it wasn't response to that question. The question  
21 was just simply whether this would eliminate the problem  
22 of the firm -- if you use both the firm service



1 methodology and the direct load control methodology for  
2 bidding in the PJM, would it eliminate this problem of  
3 requiring customers to opt in. That was the question.

4 MR. FEELEY: And the witness responded  
5 accordingly. I don't think that has a yes or no answer.  
6 He gave his explanation.

7 MR. GIORDANO: There was no -- it wasn't  
8 related to the question. The question was simply  
9 whether it would eliminate the problem, whether you had  
10 to require somebody to use the direct load control.

11 JUDGE HAYNES: The answer will stay in the  
12 record.

13 MR. GIORDANO: No further questions.

14 JUDGE HAYNES: No one else has cross for the  
15 witness?

16 MR. GHOSHEL: No cross.

17 MR. FOSCO: No cross, your Honor.

18 JUDGE HAYNES: Redirect.

19 MR. FEELEY: Can we take a break?

20 JUDGE HAYNES: Five minutes or long?

21 MR. FEELEY: Hopefully five.

22 (Recess.)

1 JUDGE HAYNES: Go back on the record.

2 REDIRECT EXAMINATION

3 BY MR. FEELEY:

4 Q. Dr. Kennedy, during the cross examination by Mr.  
5 Giordano, do you remember discussing the short run  
6 effects of capacity price reduction?

7 A. Yes.

8 Q. Can you explain what you meant when you testified  
9 about short run disequilibrium?

10 A. I can't even say it. Yes, I'd be happy to. If  
11 the market dropped there because there was a sudden  
12 addition, unanticipated addition to capacity to fly from  
13 the demands by management, peak time reduction,  
14 whatever, what happens there is the market -- the  
15 capacity market goes down precipitously, the market  
16 would be expected to adjust by capacity being added more  
17 slowly in the future to replace that and the market  
18 price in the long run, as should be expected, gravitate  
19 towards the costs of capacity, of new capacity. So the  
20 short run, the shock could cause price to go down, the  
21 long run the price is going to go back to pretty much  
22 where it was before, as the market grows and assimilates

1     this new capacity or some expected capacity from the  
2     demand response.

3                   MR. FEELEY:   That's all I have.

4                   JUDGE HAYNES:   Thank you.

5                   MR. GIORDANO:   It won't be long.

6                                 RECROSS EXAMINATION

7     BY MR. GIORDANO:

8           Q.   You're aware, aren't you, that demand response is  
9     the lowest cost capacity?

10          A.   I am aware of claims it is.   I'm not -- I don't  
11     necessarily ascribe to that view.

12          Q.   Except for purposes of this question that it is,  
13     when you say that it will -- that the market will revert  
14     to the cost of the new capacity, that could be a very  
15     good thing if that's the low cost demand response,  
16     correct?

17          A.   It will really not affect the capacity in the  
18     long run when all the lights would go out, because as  
19     the generation keeps getting replaced by demand size  
20     management, that means we're using less and less  
21     electricity and there's no capacity to produce it.

22                   MR. GIORDANO:   No further questions.   I have

1 to blame this on my witness here. He asked me to ask  
2 you if I'm going to be the last person to cross you.

3 THE WITNESS: Maybe.

4 MR. GIORDANO: We've gone full circle.  
5 Enjoy your -- maybe I'm saying too much. Ciao.

6 MR. FEELEY: No re-redirect.

7 JUDGE HAYNES: Thank you. Thank you,  
8 Dr. Kennedy. Okay.

9 MR. FEELEY: I guess Mr. Giordano had a  
10 second cross exhibit.

11 JUDGE HAYNES: Was there any objection to  
12 admitting Comverge cross Exhibit 2?

13 MR. FEELEY: No objection.

14 JUDGE HAYNES: Does the company object?

15 MR. FOSCO: No.

16 JUDGE HAYNES: That exhibit is admitted.

17 JUDGE HAYNES: Okay.

18 Mr. Garcia. Please raise your right hand,  
19 Mr. Garcia. Do you solemnly swear to tell the truth,  
20 the whole truth, and nothing but the truth?

21 THE WITNESS: I do.

22 MR. ROONEY: Good afternoon, your Honor.

1 John Rooney on behalf of ComEd.

2 DIRECT EXAMINATION

3 BY MR. ROONEY:

4 Q. Mr. Garcia, please state your name and spell your  
5 last name, for JUDGE HAYNES reporter?

6 A. Robert Garcia. It's G-a-r-c-i-a.

7 Q. Mr. Garcia, do you have in front of you three  
8 pieces of testimony, the first identified as ComEd  
9 Exhibit 1.0, which is the revised direct testimony of  
10 Robert Garcia?

11 A. Yes.

12 Q. Do you have also in front of you ComEd Exhibit  
13 3.0, which is the supplemental direct testimony of  
14 Robert Garcia and attached thereto as ComEd Exhibit 1,  
15 which is the proposed rider PCR?

16 A. Actually I have to correct myself. I have the  
17 pre-revised versions in my book.

18 Q. I'll tell you what --

19 A. Maybe we should switch books.

20 Q. One second. Now do you have revised Exhibit 1 in  
21 front of you?

22 A. I do, indeed.

1       Q. Is that identify as supplemental direct  
2 testimony, which is identified as Exhibit 3.0 and  
3 attached to that is Exhibit 3.1 which is the draft of  
4 the rider PTR?

5       A. Correct.

6       Q. Also do you have in front of you ComEd Exhibit  
7 5.0, which is the revised testimony of Robert Garcia?

8       A. Yes.

9       Q. Were those pieces of testimony prepared by you  
10 or under your direction?

11      A. Yes, they were.

12      Q. If I ask you questions contained therein, would  
13 your answers be the same?

14      A. Yes, they would.

15               MR. ROONEY: With that, your Honor, ComEd  
16 would move for admission of ComEd Exhibits 1.0, 3.0,  
17 3.1, 5.0. I would observe that with regard to all of  
18 these documents, they have been filed on eDocket. The  
19 revised direct and rebuttal were filed yesterday.

20               JUDGE HAYNES: Can you say that again?  
21 Which ones are revised?

22               MR. ROONEY: I'm sorry. 1.0 and 5.0.

1 JUDGE HAYNES: Okay. Is there any  
2 objection?

3 MR. FEENEY: No objection.

4 JUDGE HAYNES: Hearing none, those exhibit  
5 are admitted into the record.

6 MR. ROONEY: Thank you.

7 Mr. Garcia is available for cross  
8 examination.

9 JUDGE HAYNES: Who would like to go first?

10 MR. FEENEY: It doesn't matter. I can go  
11 first.

12 MR. GIORDANO: Go ahead.

13 CROSS EXAMINATION

14 BY MR. FEENEY:

15 Q. Good afternoon, Mr. Garcia. My name is John  
16 Feeley and I represent the Staff.

17 A. Good afternoon.

18 Q. I have a few questions for you.

19 MR. FEELEY: But before I do, can I approach  
20 the witness?

21 JUDGE HAYNES: Yes.

22 BY MR. FEELEY:

1 Q. Mr. Garcia, I've handed to you what I had JUDGE  
2 HAYNES reporter mark for identification as Staff Cross  
3 Exhibit No. 1.

4 A. Yes, sir.

5 Q. That's the company's response to staff data  
6 request OGC 1.01. Does that appear to be a complete  
7 copy of the company's response to that PR?

8 A. Yes. I believe it is.

9 MR. FEELEY: At this time staff would move  
10 to admit into evidence Staff Cross Exhibit 1, which is  
11 company's response to OGC 1.01. That's a narrative  
12 response and there's four attachments, it's a group  
13 exhibit.

14 JUDGE HAYNES: Okay. Is there any  
15 objection?

16 MR. ROONEY: No objection.

17 MR. FEELEY: And also at this time we'd ask  
18 the ALJ to take administrative notice of a tariff sheet  
19 from ComEd's general terms and conditions, it's original  
20 sheet 201.8 and it's with regards to terms and  
21 conditions on the subject of historical billing and  
22 usage information. I provided you, you know, with the



1 first few pages of it, terms and conditions, and then  
2 that actual sheet, original sheet 201.8.

3 JUDGE HAYNES: Okay.

4 MR. ROONEY: No objection, your Honor.

5 JUDGE HAYNES: Okay. I didn't actually  
6 admit Staff Cross Exhibit 1, so that is admitted into  
7 the record.

8 MR. FEELEY: Thank you.

9 JUDGE HAYNES: Go ahead.

10 BY MR. FEELEY:

11 Q. Mr. Garcia, you're familiar with the company's  
12 peak time rebate tariff proposal, correct?

13 A. Yes.

14 Q. Do you have a copy of that in front of you?

15 A. You mean Exhibit 3.1?

16 Q. I forget which number. I think it was attached  
17 to your petition?

18 A. 3.1 was the most recent version that reflects the  
19 changes in the case implementation.

20 Q. If you could look at revised sheet number 353, at  
21 the end of the second paragraph under peak time rebate?

22 There's a --

1       A.   Beginning compensation of received?

2       Q.   No, it begins however the company?  I don't -- I  
3   can read the entire thing.  It states however the  
4   company must make all reasonable efforts to designate a  
5   number of curtailment periods in any given year that  
6   serves to minimize absolute value of such accrues from  
7   such year to subsequent years.  Do you see that?

8       A.   Yes, I do.

9       Q.   Is that language intended to mean that if  
10   sufficient money is left over to pay for five more  
11   events, that ComEd would call more events?

12      A.   Five more than what?

13      Q.   Events?

14      A.   I got -- I'm not understanding what you mean by  
15   left over.  Do you mean at the end of the year?

16      Q.   If there's money available and there's enough and  
17   that's enough to call five more events, is that language  
18   intended to mean that ComEd would call five more events?

19      A.   I guess all else being equal, that's generally  
20   correct.  It's partly earned by the number of hours in  
21   the events.  You could have, perhaps, longer -- an event  
22   with more hours covered, but you might also accomplish

1 the same use of the funds received from PJM.

2 Q. But that's what that language is intended to  
3 allow for, correct?

4 A. It part, yeah. It would be a combination of  
5 hours and events.

6 Q. If there was enough money for five more events,  
7 then that language -- under that language ComEd would  
8 qualify more events?

9 A. Yeah. I would have to defer that level of  
10 specificity to Mr. Eber. I don't know if he would  
11 prefer to call longer events, for whatever study  
12 purposes than necessarily cover five more. For example,  
13 if you could call five more, I don't know if you would  
14 call five one-hour events or two two-and-a-half-hour  
15 events, I don't know if he would necessarily -- if it  
16 would necessarily result in five events is my point.

17 Q. Under the assumption that it would allow -- that  
18 there's enough money to cause five more events, that  
19 language is intended and ComEd would be permitted under  
20 that tariff language to call five more events, correct?

21 A. I wouldn't say intended. It would allow, yeah.  
22 It would allow for that to happen.

1 Q. If you could go to your rebuttal testimony,  
2 revised page 6, 7?

3 MR. ROONEY: Pages 6, 7, John?

4 MR. FEELEY: Pages 6 through 7.

5 MR. ROONEY: Thank you.

6 BY MR. FEELEY:

7 Q. Looking specifically at lines 140 through 154, if  
8 you could just look that up.

9 A. Yes.

10 Q. Your testimony there you discuss staff witness  
11 Kennedy's proposal to limit the number of unnecessary  
12 events and instead to provide what you call a bonus  
13 payment. Do you see that there?

14 A. Yes.

15 Q. You also state that would require additional and  
16 seemingly unnecessary processes for the calculation of  
17 late bonus payments?

18 A. Yes.

19 Q. You further caution the commission that adding  
20 processes could increase the administrative cost,  
21 causing PTR program not to pass the net benefits test.  
22 Do you see that?

1       A.   Yes.

2       Q.   Would you agree that under your proposal one or  
3   more events would likely need to be called above the one  
4   PJM test event and/or PJM real events?

5       A.   Could you repeat that?

6       Q.   Would you agree under your proposal, as opposed  
7   to Dr. Kennedy's, one or more events would likely be  
8   needed -- would likely need to be called above the one  
9   PJM test event and or PJM real event?

10      A.   Yes.   That likely would be the case.

11      Q.   Would you agree that under your proposal the  
12   company would have to calculate the baseline for each  
13   customer for each event?

14      A.   Yes.   That would be part of the calculation of  
15   the rebate to the customer.

16      Q.   Would you agree that under your proposal the  
17   company would have to report the savings and credits to  
18   each customer for each additional event?

19      A.   I'm sorry.   That was the savings and the --

20      Q.   And credits?

21      A.   By savings, do you mean the reduction of kilowatt  
22   hours?

1 Q. Yes, and the credits to each --

2 A. And the corresponding payment for those  
3 reductions?

4 Q. Yes.

5 A. I don't know if we worked so far as to how the  
6 bill presented would look in that regard. But, yeah,  
7 there would definitely be a statement as to what the  
8 total rebate would be.

9 Q. But you would have to report that to each  
10 customer?

11 A. Yes. That's correct.

12 Q. Are there any other activities that would be  
13 involved in calling more events under your proposal?

14 A. That's a question I would defer to Mr. Eber, in  
15 terms of what would go into that.

16 Q. Would you agree that under your proposal calling  
17 more events would have costs?

18 A. Possibly. I'm not familiar with some of the  
19 details of how the program would be implemented, as many  
20 of these details have yet to be determined basically.

21 Q. Would you agree that under your proposal  
22 calculating baselines for additional events would have

1 costs?

2 A. It would depend on the level of automation.

3 Again, I'd have to defer that to Mr. Eber as to what  
4 they're anticipating. If it's a manual process, then  
5 most certainly it would be required. To the extent it's  
6 a combination of manual and an automated process, there  
7 would obviously be an incremental cost. If it is solely  
8 an automated process, you know, kind of a shaving a  
9 little bit of the last point, because there's always  
10 going to be some annual reduction.

11 Q. Would you agree that under your proposal  
12 reporting savings and credits to customers would have  
13 costs?

14 A. In terms of?

15 Q. For the additional limits?

16 A. Yes, it's possible. It's possible.

17 Q. Have you or ComEd calculated all the costs  
18 involved with calling additional events under your  
19 proposal?

20 A. Not to my knowledge, no.

21 Q. Is it correct that you haven't performed any  
22 analysis which shows that limiting the events and

1 providing what you call a bonus payment at the end of  
2 the year, as proposed by Dr. Kennedy, is more costly  
3 than your proposal of calling for additional events?

4 A. No. The costly, that context is sort of a  
5 different meaning to me because if there's value in  
6 addition to any operational costs might be incurred of  
7 calling more events, there is the additional expense  
8 that the customers would have in responding which is an  
9 important aspect of the program. You have to teach  
10 people how to respond and take the necessary action from  
11 home. There is the opportunity, as I believe was  
12 discussed earlier in cross examination, for customers to  
13 save additional use. So I don't -- I think on that, I  
14 don't know if it's more costly or not from that  
15 perspective. I'm not sure that's answering your  
16 question.

17 Q. But you haven't done any cost analysis, comparing  
18 your proposal to Dr. Kennedy's proposal, correct?

19 A. No. Not in that light, no. I think not in the  
20 light you're posing the question.

21 Q. If I can direct you to pages 22 to 23 of your  
22 Exhibit 5, lines 501 through 506?



1       A.   You say 501 to 506?

2       Q.   Yes, I'm sorry.  501 through 506.  Let me know  
3   after you've found it?

4       A.   Okay.

5       Q.   Do you believe putting curtailment service  
6   provides or CSPs at a competitive disadvantage would  
7   discourage CSPs from entering the market?  Do you want  
8   me to ask the question again or --

9       A.   No, no, I understand.  I'm thinking about it.  It  
10   might discourage them.  I don't know if it would stop  
11   them from entering the market.

12      Q.   You're saying it might discourage them?

13      A.   It might.

14      Q.   Do you know whether ComEd would be willing to  
15   provide CSP with customer baseline calculation data?

16      A.   I believe I said in my testimony that like the --  
17   if it amounted to a spreadsheet calculation, using the  
18   existing baseline methodology to be developed, we would  
19   most certainly be able to share that calculation via,  
20   you know, Excel or a similar format spreadsheet.

21      Q.   Do you know whether ComEd would be willing to  
22   provide curtailment service providers with billing

1 services?

2 A. I don't know of any ComEd opinion as to, in  
3 essence, opening up ORCP to entities other than -- I  
4 don't have an opinion as to that.

5 Q. You don't. But do you know whether ComEd has?

6 A. I'm sorry. I don't know ComEd's view of that  
7 question. I don't know what companies it would be.

8 Q. You haven't discussed that with anybody?

9 A. There was not time to contemplate whether or not  
10 to offer a brand-new service to an entity we've never  
11 worked with directly before.

12 MR. FEELEY: One second.

13 I think that's it. Thank you.

14 JUDGE HAYNES: Thank you.

15 Comverge.

16 MR. BARON: Yes, your Honor.

17 Good afternoon, Mr. Garcia.

18 THE WITNESS: Good afternoon.

19 MR. BARON: My name is Blake Baron. I  
20 represent Comverge in this proceeding. I have a few  
21 questions for you.

22 CROSS EXAMINATION

1 BY MR. BARON:

2 Q. I direct you to Exhibit 1 of your testimony, page  
3 19, specifically lines 438 to 440.

4 A. 438 through?

5 Q. 440. Have you got that? You state that the  
6 Commission will determine whether ComEd should pursue  
7 the inclusion of DLCs in its final order based on the  
8 analyses provided and testimony entered by the parties,  
9 correct?

10 A. That's what I said there. Yes.

11 Q. Can I direct your attention to the same exhibit,  
12 page 13, lines 296, 298. There you state ComEd proposes  
13 a minimum one-hour notification period to customers,  
14 correct, under -- PTR?

15 A. Correct.

16 Q. Therefore, if ComEd has multiple -- you know,  
17 tries to attempt to notify the customer and they're  
18 either successful or not, does the customer then have to  
19 curtail under the ComEd's proposal of being notified?

20 A. Do they have to? No. It's a voluntary response  
21 program.

22 MR. BARON: Thank you. That's all the

1 questions I have.

2 JUDGE HAYNES: Okay. Redirect.

3 MR. ROONEY: None.

4 JUDGE HAYNES: Thank you, Mr. Garcia.

5 THE WITNESS: Thank you.

6 JUDGE HAYNES: Mr. Eber, please raise your  
7 right hand. Do you solemnly swear to tell the truth,  
8 the whole truth, and nothing but the truth?

9 THE WITNESS: I do.

10 DIRECT EXAMINATION

11 BY MR. FOSCO:

12 Q. Mr. Eber, please state your name for the record  
13 and spell your last name?

14 A. James Eber. E-b-e-r.

15 Q. Mr. Eber, you have in front of you what has been  
16 marked for identification as ComEd Exhibit 2.0, the  
17 direct testimony of James Eber?

18 A. I do.

19 Q. Attached to that is an Exhibit, ComEd Exhibit  
20 2.1?

21 A. Yes. I have that.

22 Q. Do you also have in front of you what was marked

1 for identification as ComEd Exhibit 4.0, the  
2 supplemental direct testimony of James Eber?

3 A. Yes, I do.

4 Q. With that do you have ComEd Exhibit 4.1?

5 A. Yes.

6 Q. Do you also have in front of you what was marked  
7 for identification as ComEd Exhibit 6.0, the rebuttal  
8 testimony of James Eber, and attachment 6.1 through 6.8?

9 A. I do.

10 Q. Were all of these testimonies prepared by you or  
11 under your direction and control?

12 A. They were.

13 Q. If I were to ask you to the questions set for --  
14 well, do you have any revisions or modifications?

15 A. I do not have any revisions.

16 Q. If I were to ask you the questions set forth in  
17 ComEd Exhibits 2.0, 4.0, and 6.0 today, would your  
18 answers be the same?

19 A. They would.

20 MR. FOSCO: Your Honor, we would move for  
21 the direct testimony of Mr. Eber and Exhibit 2.1 were  
22 filed and e-Docket on September 10, 2012, the

1 supplemental direct testimony, ComEd Exhibit 4.0 and  
2 ComEd 4.1 were filed on e-Docket on October 5th and the  
3 rebuttal testimony, ComEd Exhibit 6.0 through 6.8 was  
4 filed on eDocket on November 29. We would move for  
5 admission of the exhibits.

6 JUDGE HAYNES: Is there any objection?

7 Hearing none, those exhibits that were filed  
8 on eDocket are admitted.

9 MR. FOSCO: Mr. Eber is available for cross  
10 examination.

11 JUDGE HAYNES: Okay. Who's first.

12 MR. FEELEY: Good afternoon, Mr. Eber. My  
13 name is John Feeley and I represent the Staff. I have a  
14 few questions for you and then some that Mr. Garcia  
15 seemed to refer to.

16 THE WITNESS: Good afternoon.

17 CROSS EXAMINATION

18 BY MR. FEELEY:

19 Q. If you could look at your rebuttal testimony,  
20 page four, lines 74 through 80.

21 A. I have them.

22 Q. Is it your opinion or your testimony that

1 Dr. Kennedy proposed to cap the total number events  
2 called for all purposes at three events?

3 A. My understanding was that was what Dr. Kennedy  
4 proposed, to cap the number of events at three, correct.

5 Q. If you look at your Exhibit 6.2, your rebuttal.  
6 Do you have a chart there of DLC net benefits?

7 A. I do.

8 Q. Is it correct that your analysis of the scenarios  
9 presented in Mr. Lacy's analysis concludes that the  
10 earliest year in which the net benefits of the direct  
11 control component of PTR would achieve net benefits as  
12 the year 2019?

13 A. Under some scenarios that Mr. Lacey proposed, the  
14 net benefits on an annual basis become positive in 2019.  
15 That's this analysis that we --

16 Q. Does that suggest that net benefits from direct  
17 load control to customers under all of Mr. Lacy's  
18 scenarios is higher with installation of direct load  
19 control does not take place until the year 2019 at the  
20 earliest?

21 A. What this analysis shows is that the total  
22 annualized costs shown that Mr. Lacey provided using our

1 original model shows that the total annual costs are  
2 higher than the total annual benefits in each of those  
3 years. This would be one of the factors that I would  
4 use in determination, if and when to invest in the  
5 direct load control technology.

6 Q. Going back to some of the questions I asked  
7 Mr. Garcia. So you're aware of Dr. Kennedy's proposal  
8 and the company's proposal. Would you agree that under  
9 the company's proposal, one or more events would likely  
10 need to be called above the one PTA test event and or  
11 PJM real events?

12 A. Yes. And there's good reason to call more than  
13 one event. I mean even if we could give all the money  
14 we collect from PJM back to customers in one event, it's  
15 a going to take some time for customers to understand  
16 how to participate in these programs, even though  
17 they're not overly complicated to participate. It's  
18 going to take some awareness, maybe three or four events  
19 a year to get customers accustomed to participating in  
20 these types of events. So that if we have a PJM  
21 emergency, we have a better sense of what we're going to  
22 get and those responses are more reliable.



1       Q. Then under the company proposal, the company  
2 would have to calculate the baseline for each customer  
3 for each event, correct?

4       A. We would.

5       Q. Would you agree that under the company proposal,  
6 the company would have to report the savings and credits  
7 to each customer for each additional event?

8       A. We would.

9       Q. Are there any other activities that would be  
10 involved in calling more events under the company's  
11 proposal?

12       A. Yes. In your questioning of Mr. Garcia, you  
13 correctly identified each event would have some costs  
14 associated with running the event. Those costs or  
15 things like, you know, delivering notification of  
16 customers and text messages and stuff like that. The  
17 overall cost of running the event, you know, one of the  
18 ways we'll make this program more successful is to drive  
19 those costs as low as we can. Some of those costs, like  
20 baseline -- and bill presentment in presenting the  
21 actual data of the customers should be very, very low  
22 marginal costs. Once the systems are created, that will

1 provide those kinds of function.

2 Q. There are costs for calculating baselines for  
3 each additional event, correct?

4 A. The costs -- the specific costs in calculating  
5 the baselines for an event, marginal costs could be  
6 very, very low. The cost -- the bigger costs about that  
7 will be in developing and putting in place the IT  
8 components that are going to be required to make that  
9 happen. Once those components are in place, the  
10 marginal costs of running an event or calculating a  
11 baseline like for an event should be highly automated  
12 and fairly low for that particular.

13 Q. I'm sorry for this. If you could jump back to  
14 your Exhibit 6.2?

15 A. Yes.

16 Q. Given the numbers that are shown there in your  
17 Exhibit 6.2, would you recommend to your company that  
18 they install DLC technology before the year 2019?

19 A. My recommendation would be to not install or  
20 provide direct load control equipment in any given year  
21 that we expect the cost to exceed the benefits.

22 Q. The year 2019, according to the Exhibit 6.2,

1     that's the first time that the costs are less than the  
2     benefit?

3     A.   Yes.   What's a little bit confusing is that we  
4     modeled 16 different possible scenarios with possible  
5     outcomes if you were to do or offer direct load control,  
6     what the possible outcome could be.   So in some of these  
7     cases, the cases where we had greater load drops from a  
8     piece of equipment, those cases the benefits would  
9     exceed the costs sooner because we're getting more per  
10    switch.

11                   MR. FEELEY:   That's all I have.   Thank you,  
12    Mr. Eber.

13                   JUDGE HAYNES:   CUB?

14                   MR. GHOSHEL:   Thank you.

15                               CROSS EXAMINATION

16    BY MR. GHOSHEL:

17       Q.   Good afternoon, Mr. Eber.   We met before.   My  
18    name is Orijit Ghoshel.   I'm an attorney with CUB.   I'll  
19    be asking you a few questions about your direct and  
20    rebuttal testimony and some of your ER responses in this  
21    case.

22       A.   Good afternoon.

1 Q. Good afternoon. You are still employed by ComEd  
2 as the manager of demand response and dynamic pricing,  
3 correct?

4 A. Correct.

5 Q. As manager of demand response and dynamic  
6 pricing, you are responsible for ComEd's portfolio of  
7 customer products in the area of demand response and  
8 dynamic pricing, correct?

9 A. I am.

10 Q. In your responsibilities as manager, you helped  
11 develop the tariffs to implement demand response and  
12 dynamic pricing programs, right?

13 A. I have.

14 MR. GHOSHEL: May I approach the witness,  
15 your Honor?

16 JUDGE HAYNES: Yes.

17 MR. GHOSHEL: I will not be moving this into  
18 evidence, but I will be asking for administrative notice  
19 to be taken. So, should I give JUDGE HAYNES reporter  
20 any copies?

21 JUDGE HAYNES: No.

22 BY MR. GHOSHEL:

1       Q. Mr. Eber, do you recognize this document which is  
2       titled Rider CLR Capacity Based Load Responses System  
3       Liability Program?

4       A. I do.

5       Q. Does this document represent the tariff sheets  
6       that put into effect ComEd's capacity based load  
7       response and systems reliability program?

8       A. Yes.

9       Q. Is this document a true and accurate  
10      representation of ComEd's rider CLR?

11      A. I'm assuming it is. I haven't read it and  
12      compared it to the actual -- to my version. But, yes,  
13      I'm assuming it is.

14               MR. GHOSHEL: Your Honor, I ask that you  
15      take administrative notice of this rider, it's a tariff  
16      sheet that's filed pursuant to commission orders.

17               MR. FOSCO: No objection, your Honor.

18               JUDGE HAYNES: Okay.

19      BY MR. GHOSHEL:

20      Q. Does ComEd currently offer rider CLR to any of  
21      its customers?

22      A. We actually do not.

1       Q. The four customers who had received compensation  
2 through rider CLR, was the revenue to fund that  
3 compensation obtained by ComEd through the PJM capacity  
4 market?

5       A. Yes. The incentives that we paid under this  
6 program were funded through the PJM capacity --

7       Q. In your opinion, as manager of dynamic pricing  
8 and demand response programs at ComEd, does rider CLR,  
9 the tariff itself, restrict the months of the year that  
10 ComEd's customers can enroll in the capacity based and  
11 load response and system reliability program?

12      A. I don't believe that the restriction of when a  
13 customer can sign up for what we used to offer under  
14 this tariff is obtained within the tariff.

15      Q. Thank you.

16               MR. GHOSHEL: May I approach the witness  
17 again, your Honor?

18               JUDGE HAYNES: Yes.

19 BY MR. GHOSHEL:

20      Q. Mr. Eber, do you recognize this document I just  
21 handed you that's been marked as CUB cross Exhibit 1,  
22 which is ComEd's response to CUB data request 5.05 in

1 this proceeding?

2 A. I do.

3 Q. Was this document prepared by you or under your  
4 supervision and control?

5 A. It was.

6 Q. Is this document an accurate copy of the response  
7 you prepared?

8 A. I believe it is.

9 MR. GHOSHEL: Your Honor, CUB moves for the  
10 admission of CUB cross Exhibit 1.

11 JUDGE HAYNES: Any objection?

12 MR. FOSCO: No objection.

13 JUDGE HAYNES: CUB cross Exhibit 1 is  
14 admitted.

15 BY MR. GHOSHEL:

16 Q. In this response you said that rider CLR does not  
17 expressly set an enrollment period or limits on the  
18 months of the year in which customers can enroll,  
19 correct?

20 A. That's correct. Those requirements are not  
21 stated in there.

22 Q. But you go on to say that customers were only

1 allowed to enroll during select months under this  
2 program, right?

3 A. That's correct.

4 Q. In your experience with this program, do you ever  
5 recall receiving a request from a customer to enroll for  
6 rider CLR that was outside of those select months?

7 A. I don't think so, no.

8 MR. GHOSHEL: Your Honor, may I approach the  
9 witness?

10 JUDGE HAYNES: Yes.

11 BY MR. GHOSHEL:

12 Q. Mr. Eber, do you recognize this document which is  
13 titled rider VLR, voluntary load response to system  
14 reliability program?

15 A. I do.

16 Q. Does this document represent the tariff sheets  
17 that put into effect ComEd's voluntary load response and  
18 system reliability program?

19 A. It would appear to.

20 Q. Does this document appear to be a true and  
21 accurate representation of ComEd's rider VLR?

22 A. It is.



1                   MR. GHOSHEL: Your Honor, I ask that you  
2 take administrative notice of this document.

3                   MR. FOSCO: No objection.

4                   JUDGE HAYNES: Okay.

5 BY MR. GHOSHEL:

6           Q. Does ComEd currently offer rider VLR to any of  
7 its customers?

8           A. We do.

9           Q. For customers who receive compensation through  
10 rider VLR, is the revenue used to fund that compensation  
11 obtained by ComEd through the PJM capacity market?

12          A. It is not.

13          Q. In your opinion, as manager of dynamic response  
14 -- excuse me, demand response to dynamic pricing  
15 programs at ComEd, does rider VLR, the tariff itself,  
16 restrict the months of the year that ComEd's customers  
17 can enroll in the voluntarily load response reliability  
18 program?

19          A. It does not.

20                 MR. GHOSHEL: Your Honor, may I approach?

21                 JUDGE HAYNES: Yes.

22 BY MR. GHOSHEL:

1       Q. Mr. Eber, do you recognize this document that has  
2       been marked a CUB cross Exhibit 2, which is ComEd  
3       response to CUB data request 5.04 in this proceeding?

4       A. I do.

5       Q. Was this document prepared by you or under your  
6       supervision and control?

7       A. It was.

8       Q. Is this document an accurate copy of the response  
9       you prepared?

10      A. It is.

11               MR. GHOSHEL: Your Honor, CUB moves for the  
12      admission of CUB cross Exhibit 2.

13               MR. FOSCO: No objection.

14               JUDGE HAYNES: CUB cross Exhibit 2 is  
15      admitted.

16      BY MR. GHOSHEL:

17      Q. Mr. Eber, in this response you state that rider  
18      VLR does not expressly set an enrollment period or  
19      limits on the months of the year in which customers can  
20      enroll, correct?

21      A. That's correct.

22      Q. But you do state that ComEd makes an enrollment

1 push during select months of the year, correct?

2 A. Correct.

3 Q. In your experience with this program, do you  
4 recall receiving a request from any customer to enroll  
5 for VLR that was outside of those select months?

6 A. For this particular program, we did get request  
7 outside of the window that we had a concerted effort to  
8 get customers in this program and we did a lot of that.

9 Q. I'll turn your attention now to your direct  
10 testimony, that's ComEd Exhibit 2.0, page six, lines  
11 119 through 128.

12 A. What were the line references again?

13 Q. 119 through 128.

14 A. I have them.

15 Q. Is it fair to paraphrase your testimony that you  
16 are explaining why you think that enrolling customers  
17 for PTR in the summer months may cause confusion?

18 A. Yes. That's what I explained in this.

19 Q. Is it fair to say that your opinion that  
20 confusion would result is based on your experience  
21 administering demand response programs?

22 A. Yes.

1 MR. GHOSHEL: Your Honor, may I approach?

2 JUDGE HAYNES: Yes.

3 MR. GHOSHEL: The last time.

4 BY MR. GHOSHEL:

5 Q. Mr. Eber, do you recognize this document that has  
6 been marked as CUB cross Exhibit 3, which is ComEd's  
7 response to CUB data request 5.03 in this proceeding?

8 A. I do.

9 Q. Was this document prepared by you or under your  
10 supervision and control?

11 A. It was.

12 Q. Is this document an accurate copy of the response  
13 you prepared?

14 A. It is.

15 MR. GHOSHEL: CUB moves for the admission of  
16 CUB cross Exhibit 3.

17 JUDGE HAYNES: Any objection?

18 MR. FOSCO: No objection.

19 JUDGE HAYNES: It's admitted.

20 MR. GHOSHEL: Thank you.

21 BY MR. GHOSHEL:

22 Q. Mr. Eber, in this response you indicate that your

1 concern regarding confusion is not based on similar  
2 experience or case examples to administering such  
3 programs in the past, correct?

4 A. It is.

5 Q. Your concern that confusion may be caused is not  
6 based on empirical results, correct?

7 A. There's -- I do not have any empirical evidence  
8 that would quantify the amount of confusion that is  
9 being seen in other circumstances similar to this, no.

10 Q. In fact, ComEd has not offered a program that  
11 includes a similar pre-enrollment process, is that  
12 correct?

13 A. No, we haven't.

14 Q. But it is --

15 A. Not for residential customers.

16 Q. Thank you. But it is still your position that  
17 customers may become confused if they enroll in PTR in  
18 one summer and do not receive any rebates until the  
19 following summer, right?

20 A. I am concerned about that.

21 Q. Customers could also be confused if they attempt  
22 to enroll in PTR one summer, but are denied enrollment,

1 correct?

2 A. That could cause confusion as well.

3 Q. Turning back to your direct testimony, page six,  
4 line 126. You refer to certain mass media alerts, is  
5 that correct?

6 A. I do.

7 Q. When will these mass media rebate events be  
8 implemented by ComEd?

9 A. Well, ComEd controlled mass media alerts will  
10 probably not occur until the footprint that we're  
11 operating in is sufficient to contain the likely -- if a  
12 radio announcement goes out to an area, we would like  
13 that area to be able to participate in the program. We  
14 don't want to send alerts out to areas that because the  
15 AMI deployment hasn't occurred in that area would cause  
16 customer confusion and they wouldn't know what we're  
17 talking about. They wouldn't even have an opportunity  
18 to enroll in the program. So we don't plan on  
19 initiating those types of alerts until we think that the  
20 footprint affected by them is -- in the program.  
21 However, we can't control all of the media and if an  
22 event gets picked up by a broadcast, we don't want a

1 customer that has been enrolled or pre-enrolled after a  
2 deadline, to get that customer into the program and  
3 you're achieving benefits. We don't want that customer  
4 to think, oh, I should be participating, actually do  
5 something and not receive a credit for that. So that's  
6 the primary concern that we have along those lines.

7 Q. You just referenced possible broadcast through  
8 media that ComEd does not control. Are you aware of any  
9 such broadcasts resulting from events in other PTR  
10 programs across the country?

11 A. The other similar situations. When there are hot  
12 days and there are alerts or ozone warnings, things that  
13 in the past we have requested voluntary reductions of  
14 load from all of our customers, those types of things do  
15 get picked up by media outlets and do get -- the word  
16 gets spread on those dates. Or peak load has become  
17 something of interest on hot days, we generally get some  
18 press around, you know, how much customers are using on  
19 a hot day and whether we'll have, you know, capacity to  
20 meet those loads.

21 Q. PJM does not require that a demand response  
22 program that is bid into its capacity market, to limit

1 enrollment to exclude summer months, correct?

2 A. PJM doesn't dictate when a service provider can  
3 add customers, but PJM does require us to register those  
4 resources in a timeframe consistent with the enrollment  
5 period that we set forth in the --

6 Q. I understand that PJM does place restrictions on  
7 when you can register participants but doesn't restrict  
8 when you can enroll participants?

9 A. That's correct.

10 Q. You believe or you testified that customers may  
11 become disgruntled if they respond to a curtailment  
12 event, but do not receive credit for their load  
13 curtailment, right?

14 A. Yes. I think that would be to customer  
15 satisfaction.

16 Q. Similarly, customers could become disgruntled if  
17 they attempt to enroll in PTR or told they cannot during  
18 that particular month, right?

19 A. Yes. Which is why we're proposing to do research  
20 on this topic and put together a plan that allows  
21 customers that want to grow in this -- primarily in the  
22 summer months, to do so in a way that doesn't cause them



1 to think that they're actually enrolling for events that  
2 would take place that summer. Yes, we would like to  
3 accomplish that.

4 Q. What research question would such research  
5 address?

6 A. Well, I think -- the research hasn't fully been  
7 designed and we welcome participation in the design  
8 element research. But, you know, we would have focus  
9 groups and show customers materials that we would  
10 develop and ask them what their understanding is and  
11 whether or not they would participate in the program and  
12 if an event was called in two weeks, will you  
13 participate, and if they said yes, then they didn't --  
14 so that's along the lines. There would be focus groups,  
15 qualitative, trying to get an understanding of if we  
16 communicate to customers in a certain way, what is their  
17 understanding.

18 Q. When does ComEd anticipate conducting such  
19 research?

20 A. The current proposal for the first events to  
21 occur in the summer '15. That would put enrollment  
22 marketing somewhere in the middle of 2014. The research

1 would probably be conducted towards the end of next  
2 year, 2013. We don't want to do the research too early  
3 and not give the general awareness of the customer based  
4 changes or opinions or these sets of programs changes,  
5 we won't be able to reflect that and we definitely want  
6 to do it early enough so that we can develop and use it  
7 to develop the materials that we'll use in marketing the  
8 program.

9 Q. Does ComEd intend to conduct research as to  
10 whether offering an enrollment process for only select  
11 months of the year causes customer confusion?

12 A. No. Because our objective is to offer enrollment  
13 throughout the year and to figure out how to do that in  
14 a way that avoids causing that confusion.

15 Q. You also testified that the pre-enrollments  
16 option may be potential harmful to the PTR program,  
17 correct?

18 A. I don't recall that testimony.

19 Q. In your rebuttal on page five, line 98?

20 A. It's not exactly what I said in this study. I  
21 said it would be logical and potentially harmful to the  
22 PTR program to include -- basically ordering us to do

1 enrollment on a year-round basis or to do  
2 pre-enrollment independent of what we find out in the  
3 research and in executing it in the first couple years  
4 of the program. Basically meaning that if we attempt to  
5 do it and it does cause confusion and we can show that  
6 it causes more confusion than it's actually worth, we  
7 should not have to enroll customers on a year-round  
8 basis. That's what that is.

9 Q. And that confusion that could result from a  
10 year-round enrollment process could be harmful because  
11 disgruntled customers may not participate as much in the  
12 future or they may leave the program altogether,  
13 correct?

14 A. That and they can -- I mean, with social media  
15 you know bad experiences have a way of compounding  
16 themselves.

17 Q. Refusing to enroll customers during certain  
18 summer months may also result in fewer PTR program  
19 participants, correct?

20 A. Possibly.

21 Q. Moving on to major curtailment events. Are you  
22 aware of any utility offered PTR programs that place a

1 tax on the number of curtailment events at less than  
2 ten?

3 A. I am not.

4 Q. Some PTR programs have no cap on the number of  
5 curtailment events to be called, correct?

6 A. Correct.

7 MR. GHOSHEL: Thank you.

8 CUB has no further cross.

9 JUDGE HAYNES: Thank you.

10 Comverge.

11 CROSS EXAMINATION

12 BY MR. GIORDANO:

13 Q. Mr. Eber, we'll start with some questions on  
14 rebuttal testimony today, please. Page 13, lines 286 to  
15 288, you state that one of the reasons that you  
16 testified in rebuttal testimony that DLC devices should  
17 not be provided to PTR participants is that -- at this  
18 time, is that according to Mr. Lacy's analysis, the  
19 earliest year in which the net benefit of the DLC  
20 component of PTR would achieve a positive value is  
21 projected to be 2019, correct?

22 A. That is correct.

1 Q. In your exhibit that you attach to your  
2 testimony, Exhibit 6.2, isn't it true that you knocked  
3 13 years out of the cost benefit study?

4 A. No. That's not true at all.

5 Q. I guess --

6 A. I looked at each individual year. I looked at  
7 the total of the costs for that year and the total of  
8 the benefits for that year and to see if for that year  
9 the benefits outweighed the costs. I don't look at the  
10 20-year life of the program in this example at all.

11 Q. Yeah, I was wrong. You knocked 12 years out of  
12 the program, correct? Your initial cost benefit  
13 analysis that ComEd did showed the benefits from 2015 to  
14 2032 and this one cuts it off at 2022, correct?

15 A. I'll stipulate that in Mr. Lacy's worksheet, that  
16 the benefits in those years are positive.

17 Q. Yeah, but you didn't show the entire cost  
18 benefit, you didn't show each year here in this exhibit,  
19 correct?

20 A. I didn't have to. That wasn't the point of my  
21 testimony.

22 Q. Okay. I show you what's been marked as Converge

1 Exhibit 3, cross Exhibit 3. This is ComEd Exhibit 6.02  
2 in the famous ComEd AMI meter reading docket. It's the  
3 cost and benefit analysis of the Commonwealth Edison  
4 smart grid advanced metering infrastructure deployment  
5 plan and this is -- attached is table 4A of the ComEd  
6 AMI cost benefit analysis which was sponsored by ComEd  
7 witness Andrew Trump of Black & Veatch in the ComEd AMI  
8 proceedings. Isn't it true that this AMI cost benefit  
9 study showed that the net benefits to ComEd customers of  
10 AMI implementation would be negative on an annual every  
11 year through 2019?

12 MR. FOSCO: Your Honor -- we have no  
13 foundation.

14 MR. GIORDANO: What do you mean no  
15 foundation?

16 MR. FOSCO: You just showed him the document  
17 and started asking him questions. You've got no basis  
18 to start asking him --

19 MR. GIORDANO: He can take a look at the  
20 document and see if that's what it shows.

21 MR. FOSCO: Objection. Foundation, your  
22 Honor.

1 JUDGE HAYNES: Have you ever seen this  
2 document before, Mr. Eber?

3 THE WITNESS: I have not seen this table  
4 before.

5 BY MR. GIORDANO:

6 Q. Are you familiar with the ComEd AMI plan?

7 A. Yes.

8 Q. In that plan, did ComEd make a determination of  
9 when to begin the installation of the smart meters based  
10 on an annual analysis of the cost and benefits of  
11 implementing the smart meters?

12 MR. FOSCO: Your Honor, I'm going to object.  
13 It assumes facts that are contrary to law. ComEd is a  
14 participating utility, it had an obligation to file an  
15 AMI claim.

16 MR. GIORDANO: There's a cost benefit  
17 analysis that's showing that there's a negative on an  
18 annual basis until the year 2020. It's clearly  
19 relevant. It doesn't assume anything contrary to law  
20 and it's totally appropriate to ask this witness who is  
21 testifying that -- this should be judged on an annual  
22 basis of the net benefits, the implementation of direct

1 load control devices. It's clearly relevant.

2 MR. FOSCO: Your Honor, as I think you're  
3 aware, there are requirements for cost benefits. There  
4 was a specific statutory requirement as to what had to  
5 be shown for the AMI plan, which is not applicable here  
6 for PTR. There is no similar statement that goes into  
7 effect if it's cost beneficial. So I just think the  
8 purpose for which he's trying to introduce a cost  
9 benefit analysis that Mr. Eber did not look at --

10 MR. GIORDANO: ComEd was not required to  
11 implement the smart meters. ComEd was not required  
12 under the law to implement the smart meter plan. ComEd  
13 had to propose it to the commerce commission and show it  
14 was cost beneficial. It's clearly relevant how ComEd  
15 analyzed the cost and benefits of the smart meter plan.  
16 Because Mr. Eber has used this unconventional approach  
17 of this annual cost benefit analysis, passing an annual  
18 cost benefit analysis, I submit that that would apply to  
19 no investments that ComEd has made in the history of my  
20 practice here, and clearly the best example is this  
21 smart meter implementation plan. So it's clearly  
22 relevant.



1 JUDGE HAYNES: What exactly did you want to  
2 ask him about this?

3 MR. GIORDANO: About when -- about this  
4 document showing that on an annual basis the net impact  
5 to customer cost was negative in the years 2012 through  
6 2020 and then it was positive in the years 2021 to 2032,  
7 resulting in overall benefit, net benefit, of \$1.28  
8 billion.

9 JUDGE HAYNES: Objection sustained.

10 BY MR. GIORDANO:

11 Q. Well, it's your testimony, is it not, Mr. Eber,  
12 that you don't think that DLC should be adopted until  
13 the net benefits are higher on an annual basis, the net  
14 benefits exceed the costs in a particular year, is that  
15 correct?

16 A. It's one of the factors that I used to conclude  
17 that I would not recommend deploying direct load control  
18 equipment at this time.

19 Q. Has ComEd ever used that approach for any of --

20 A. On the time of its investment --

21 Q. Let me finish my question, okay? That's really  
22 rude.

1 MR. FOSCO: Your Honor, objection.

2 MR. GIORDANO: Don't interrupt me again.

3 MR. FOSCO: He's arguing with the witness.

4 MR. GIORDANO: No, I'm not arguing. He  
5 shouldn't interrupt me.

6 JUDGE HAYNES: Just ask your question.

7 MR. GIORDANO: I will, as long as I'm not  
8 interrupted. I'm not going to put up with that.

9 BY MR. GIORDANO:

10 Q. Has ComEd ever adopted this approach of analyzing  
11 on an annual basis where the net benefits exceed the  
12 cost in determining whether to make an investment?

13 A. I don't know.

14 Q. Other reasons that you state that direct load  
15 control devices should not be provided now is that  
16 reserve margins are at relatively high levels and low  
17 chlorine prices are in the PJM market, correct?

18 A. Correct.

19 Q. These facts were reflected in ComEd's cost  
20 benefit analysis of direct load control devices that was  
21 presented in this case, correct?

22 A. The analysis that I performed on the cost and

1 benefits of direct load control included an assumption  
2 around the value capacity that would have taken into  
3 account current -- values, yes.

4 Q. So the answer is yes?

5 A. Yes.

6 Q. Mr. Lacey did not change these assumptions in his  
7 evaluation of your -- and presentation regarding the  
8 cost benefit analysis, correct?

9 A. I don't know.

10 Q. On page 14, lines 297 to 299, you state that PCTs  
11 are widely available through third-party retailers and  
12 this is another reason to not offer them to PTR  
13 participants, correct?

14 A. I say instead of investigating direct control  
15 devices, it might be more advisable to promote the  
16 presence of these devices -- that's correct.

17 Q. But even if a customer purchased a PCT from a  
18 retailer, would it be controlled remotely by ComEd to  
19 reduce peak demand during curtailment events under  
20 ComEd's proposed PTR program?

21 A. It wouldn't need to be.

22 Q. But would it be?

1       A. Presumably it could be at some time in the  
2 future.

3       Q. But that's not what you're proposing now,  
4 correct?

5       A. No.

6       Q. If that customer set its PCT to maximize  
7 efficiency in the home every day, would that have the  
8 impact of lowering its curtailment CBL, customer  
9 baseline?

10      A. It could.

11      Q. If that happened, wouldn't that make PTR less  
12 appealing to that customer because they wouldn't get any  
13 money from reducing their load during a PTR event?

14      A. It would make PTR potentially less beneficial,  
15 but it would have an ongoing benefit on a daily basis.

16      Q. Let me refer you to page 16, line 351 to 353.  
17 You're testifying there that the Brattle Group -- you're  
18 testifying about -- I'm sorry, 348. You're testifying  
19 about the Brattle Group's presentation entitled direct  
20 load control of residential air-conditioners in Texas on  
21 October 25th, 2012, in Austin, Texas. And then you  
22 attach excerpts of that presentation as ComEd Exhibit

1 6.6, is that correct?

2 A. Yes.

3 Q. Now, you also testify on lines 351 to 352 on page  
4 16 that on slide nine of this presentation -- claims  
5 that a range of .8 to 1.5 KW load reduction is  
6 achievable for residential DLC programs, correct?

7 A. That's what this line says.

8 Q. Isn't it true that this presentation was made by  
9 Dr. Ahmad Faruqui of the Brattle Group?

10 A. Yes, it was.

11 Q. In the ICC's case regarding evaluation of ComEd's  
12 experimental realtime pricing program, were you a  
13 witness on behalf of ComEd?

14 A. In which proceeding?

15 Q. The evaluation of ComEd's -- I'm sorry, yeah,  
16 ComEd's experimental realtime pricing program?

17 A. I don't recall we submitted testimony. I mean I  
18 was involved in that proceeding. I don't know if I  
19 testified. I'm sorry.

20 Q. Well, it's in the record, we can produce the  
21 testimony. Do you know that Dr. Faruqui prepared a  
22 report of additional benefits from the RTP program in

1     that case?

2           A.   He did.   He worked for me to do it.

3           Q.   Right.   Didn't you conclude in your testimony in  
4     that case, that Dr. Faruqui's Brattle report in that  
5     case was a very good report?

6           A.   I don't recall that.

7           Q.   Wasn't this the report that concluded that  
8     lowered capacity prices resulting from reduced demand  
9     from participating customers could result in as much as  
10    \$60 million in net present value benefits to  
11    non-participating customers?

12          A.   That analysis reported on capacity benefits of  
13    the RPT program as we have modeled the program going  
14    forward and it had a quantification of a class of  
15    benefit.   I would have to check the number and make sure  
16    it was correct.

17          Q.   I have it here, if you want to -- do you want to  
18    look at it?   I apologize, I don't think I have extra  
19    copies of this one.   I thought that Mr. Eber would be  
20    very familiar with it.

21                   MR. FOSCO:   Do you have a question?

22   BY MR. GIORDANO:

1       Q. The question was isn't it true that Dr. Faruqui  
2       concluded that lowered capacity prices resulting from  
3       reduced demand from participating customers, reduced  
4       peak demand, could result in as much as \$60 million in  
5       net present value benefits to non-participating  
6       customers?

7       A. What number? \$90 million?

8       Q. Sixty?

9               JUDGE HAYNES: Maybe you can point us to  
10       where this is in this guideline?

11              MR. GIORDANO: Yes, sure.

12       BY MR. GIORDANO:

13       Q. It's on page five -- I'm sorry. It's actually  
14       76.3 million, in the benefits in the new aggressive  
15       scenario on table three, wholesale market benefits,  
16       ComEd residential use?

17       A. 76 million present value over 2013 to 2017 in the  
18       aggressive scenario.

19       Q. Thank you. I'd like to move on to Converge Cross  
20       Exhibit 5. This is the entire direct load control of  
21       residential air-conditioners in Texas, presentation by  
22       Dr. Faruqui. You had presented excerpts of this study

1 in your -- in ComEd Exhibit 6.6. You're familiar with  
2 this presentation, correct?

3 A. I am.

4 Q. Even though Dr. Faruqui concluded in his October  
5 25th, 2012 presentation that .8 to 1.5 per kilowatt  
6 reduction is achievable for residential VLC programs,  
7 you conclude that assumption of a .45 KW reduction from  
8 VLC in this case is consistent with Dr. Faruqui's study  
9 result, correct?

10 A. Dr. Faruqui, on page nine of his presentation,  
11 makes that statement that .8 to 1.5 is achievable. I'm  
12 not disputing that. In fact, 9 kilowatts for  
13 participant is the basis of my high scenario in the  
14 analysis that we performed, upon the request of the  
15 commission. What I am staying is that this slide that  
16 Dr. Faruqui shows, shows examples of utilities that are  
17 achieving load reduction per customer in the .4 or .6  
18 range which is consistent with the .45 or 5 that we used  
19 in the other scenario that we analyzed in the original  
20 cost benefit analysis that I provided in my testimony.  
21 So, I'm saying that both cases have been shown to be  
22 achieved in other areas and should be looked at as



1 possible outcomes.

2 Q. But the average of the per KW drop shown on page  
3 nine of Dr. Faruqui's study is over .1 -- over 1.0 per  
4 kilowatt, correct?

5 A. I didn't do that math. I think it's irrelevant.

6 Q. I'd like to refer you to page 16 of Dr. Faruqui's  
7 study. Isn't it true that he states here, he's talking  
8 about compensate -- this is a presentation about direct  
9 load control, that a compensation package from a utility  
10 for direct load control should include equipment  
11 installation at no cost to the customer and also  
12 one-time payments which vary across surveyed programs,  
13 correct?

14 A. That's what this slide says.

15 Q. And then I'd like to refer you to page 19 -- I'm  
16 sorry, 19 is the cover page. It's actually the next  
17 page, page 17. And isn't it true that Dr. Faruqui  
18 states there that DLC can be combined with dynamic  
19 pricing for optimum impact? This is the third bulletin.

20 A. That's what it says.

21 Q. Then I'd like to refer to you page 42. Isn't it  
22 true that Dr. Faruqui states there on the last bullet

1     that utilities should contemplate a based deployment  
2     using one-way communication and allow for two-way  
3     upgrades by interested customer segment providers?

4           A.   That's what he says.   Yes.

5                   MR. GIORDANO:   I'd like to move for the  
6     admission of Comverge Exhibit 5 into the record, that's  
7     the entire presentation of Dr. Faruqui on direct load  
8     control residential air-conditioners in Texas.   Mr. Eber  
9     had previously presented parts of this study.

10                   JUDGE HAYNES:   There's no objection from the  
11    company, so it's admitted into the record.

12                   MR. GIORDANO:   Thank you.

13   BY MR. GIORDANO:

14           Q.   I'd like to refer you to page 13, line 279.   You  
15    testified that if a customer would prefer to enroll  
16    with -- direct load control technology, she can enroll  
17    in rider AC, correct?

18           A.   That's correct.

19           Q.   I'm going to refer you to page ten of  
20    ComEds -- refer you to Comverge Exhibit cross Exhibit 6.  
21    This is an excerpt from -- this is page nine and ten  
22    from Comverge -- I'm sorry, ComEd's 2011 to 2013 energy

1 efficiency demand response program. Are you familiar  
2 with this document?

3 A. Yes.

4 Q. Isn't it true that ComEd proposed in that plan  
5 that it only continued the air-conditioning cycling  
6 program and maintenance mode and not expand it, to  
7 achieve additional load reduction during 2011 and 2013  
8 period? That's at the bottom of page ten and the top of  
9 page eleven.

10 A. I see it. As part of the energy efficiency of  
11 the demand response plan, we had included expansion of  
12 rider AC, which is our AC cycling program, utilizing  
13 direct load control and we had done that for three years  
14 to meet the requirements of the law that this plan is  
15 designed to meet. After examining the impact of the  
16 efficiency measures that were being run as part of this  
17 portfolio, it was learned that those efficiency measures  
18 had substantial peak load reduction impacts, so much so  
19 that those impacts met the requirement of the law and we  
20 did not require to invest more heavily in DLC, direct  
21 load control, as part of this plan to meet those  
22 specific goals.

1 Q. So ComEd did not invest further and expand the  
2 direct load control program, correct?

3 A. We did not. It is generally available to sign up  
4 for any residential single-family home with central  
5 air-conditioning.

6 Q. Does ComEd intend to propose the expansion of its  
7 air-conditioning cycling program in its 2014 to 2016  
8 energy efficiency and demand response plan?

9 A. In the demand response plan, no. The energy  
10 efficiency programs are creating a peak load reduction  
11 that meets the goal of the objectives of the law that  
12 created this activity. In regards to the AC program in  
13 general, we are not promoting the AC program in general  
14 because the annual cost of the AC program exceed the  
15 annual benefits at this time.

16 Q. You're suggesting, correct, it's ComEd's position  
17 that the direct load could be air-conditioning -- an  
18 air-conditioning cycling customer should not be allowed  
19 into the PTR program, correct?

20 A. Initially, we are. We had filed a PTR tariff  
21 that the residential AC cycling customer would not be  
22 allowed to participate in peak time rebate and the

1 air-conditioning cycling at the same time.

2 Q. I'd like to refer you to page four, lines 76, 79  
3 of your rebuttal testimony and you mentioned there that  
4 San Diego Gas and Electric is running a PTR program,  
5 correct?

6 A. That's correct.

7 MR. GIORDANO: I'd like to present Converge  
8 cross Exhibit 7. This is the PTR rider for the  
9 San Diego Gas and Electric PTR program.

10 BY MR. GIORDANO:

11 Q. Isn't it true that San Diego electric provides a  
12 significantly larger rebate to customers who are  
13 provided enabling technologies when participating in the  
14 PTR program than the rebate offered if you don't have  
15 enabling technology?

16 MR. FOSCO: Your Honor, I'm going to object  
17 unless Mr. Giordano is going to establish some  
18 foundation for this document.

19 BY MR. GIORDANO:

20 Q. Well, are you familiar with the -- you've  
21 testified about the San Diego Gas and Electric PTR  
22 program, so you're familiar with that program, correct?

1           A.    I am.

2           Q.    You're familiar with the structure of that  
3 program, correct?

4           A.    I am.

5           Q.    So isn't it true that that program offers a  
6 substantially larger rebate to customers who are  
7 providing enabling technology when they participate in  
8 the program than PTR participants who don't have  
9 enabling technology?

10          A.    Under the rate section of the document you just  
11 handed me, which is the tariff for the scheduled PTR for  
12 San Diego Gas and Electric, it states that customers  
13 with enabling technology will receive a higher bill  
14 credit of \$1.25 per kilowatt hour and before that it  
15 states that it'll credit 75 cents kilowatt hour for a  
16 reduced kilowatt hour of actual reduction and  
17 consumption of -- I know this program fairly well and  
18 I've discussed it with a number of my peers and other  
19 utilities and most of us are under the impression that  
20 this rate design does not make any sense.

21                   JUDGE HAYNES:   Okay.   Why?

22                   THE WITNESS:   Because, your Honor, the value

1 of a kilowatt hour or a kilowatt of peak reduction is  
2 not -- it doesn't matter where it comes from or how it's  
3 achieved. If you reduce by a kilowatt and I commit to  
4 PJM that I will reduce load by a kilowatt and it clears  
5 in the market, I'm going to get paid the same amount of  
6 money whether I go through direct load control or I do  
7 it by calling a lot of customers and having them turn  
8 lights off and simple things like adjusting their  
9 thermostat. So long as the reduction is the same and in  
10 this case a kilowatt hour, there is no inherent benefit  
11 of it being done with a direct load control technology.

12 BY MR. GIORDANO:

13 Q. But isn't the inherent benefit that the utility  
14 can rely on that demand reduction being more reliable  
15 and that's why they're agreeing to paying more?

16 A. No. The reliability of the delivery of the  
17 kilowatt is the same in both cases or it's not paid.  
18 It's either delivered or it's not paid.

19 MR. GIORDANO: I'd like to move for the  
20 admission of Converge cross Exhibit 7.

21 JUDGE HAYNES: Three, four, six and seven  
22 have not been admitted into the record.

1 MR. GIORDANO: Oh, they have not?

2 JUDGE HAYNES: Only five.

3 MR. GIORDANO: Sorry. You want me to move

4 -- can I move for admission of these now.

5 MR. GIORDANO: You may.

6 MR. GIORDANO: Thank you. I'd like to move

7 for the admission of ComEd Exhibit 3.

8 JUDGE HAYNES: Converge cross Exhibit 3?

9 MR. GIORDANO: Converge cross exhibit 3.

10 JUDGE HAYNES: Any objections?

11 MR. FOSCO: Yes, your Honor. I believe

12 there is no foundation established for that document --

13 JUDGE HAYNES: Let me be -- you trailed off

14 there again.

15 MR. FOSCO: I do object to Converge cross

16 Exhibit 3, that was the portion of the Black and Veatch

17 cost benefit study that Mr. Eber testified that he had

18 not seen before.

19 MR. GIORDANO: I'll withdraw that.

20 JUDGE HAYNES: Okay.

21 MR. FOSCO: What was the other exhibit, your

22 Honor? I'm sorry.



1 JUDGE HAYNES: Comverge cross Exhibit 4.

2 Are you moving for that --

3 MR. GIORDANO: This is the Commonwealth

4 Edison company --

5 MR. FOSCO: Your Honor, I object for -- just

6 for limited reasons, that Mr. Eber was able to verify

7 the number and I don't see any reason to add that to the

8 record. There's other material by the witness.

9 MR. GIORDANO: We agree. We're not

10 presenting that for the record.

11 JUDGE HAYNES: Okay.

12 MR. GIORDANO: Then we go on to Comverge

13 Exhibit 5.

14 JUDGE HAYNES: Five is in, so let's go to

15 six.

16 MR. GIORDANO: Six is the Commonwealth

17 Edison Company's 2011 --

18 MR. FOSCO: No objection.

19 JUDGE HAYNES: Okay, Comverge cross Exhibit

20 6 is admitted and you provided three copies to JUDGE

21 HAYNES reporter? Okay.

22 MR. GIORDANO: And then we'll move for

1 admission of Converge Exhibit 7.

2 MR. FOSCO: No objection.

3 JUDGE HAYNES: Okay. Converge cross Exhibit  
4 6 and 7 -- 5, 6, and 7 are in the record, are admitted.

5 MR. GIORDANO: Thank you.

6 JUDGE HAYNES: Okay.

7 BY MR. GIORDANO:

8 Q. You're aware that San Diego Gas and Electric  
9 provides that enabling direct load control technology  
10 free of charge to its customers, to participating  
11 customers in the PTR program, correct?

12 A. I actually don't know that.

13 Q. You also mentioned Southern California Edison's  
14 PTR program, correct, in your testimony?

15 A. I did.

16 Q. I'd like to show you Converge cross Exhibit 8  
17 which is the PTR rider for the Southern California  
18 Edison PTR program. Are you familiar with this program?

19 A. Very generally, yes.

20 Q. Isn't it true that like SC&E, Southern California  
21 Edison is offering higher rebates for those participants  
22 who have enabling direct load control technology than

1 those who do not?

2 A. It appears to be the same rate structure as SCG&E  
3 and again most of the rest of the nation would --

4 Q. The rest of the country thinks California is out  
5 of whack?

6 A. Yes.

7 Q. Are you aware that Southern California Edison  
8 provides its customers the enabling technology free of  
9 charge?

10 A. I'm not aware of that.

11 Q. You also mentioned on page 19, lines 422 to 425,  
12 that PEPCO has a PTR program which does not require DLC  
13 technology for participation, correct?

14 A. That is my understanding.

15 Q. Isn't it true that PEPCO is not bidding its PTR  
16 resource into the PJM capacity market?

17 A. I don't know whether they're admitting resources  
18 into the market or not.

19 Q. Let me refer you to your direct testimony, page  
20 eleven, line 227 to 229, where you testified ComEd will  
21 bid load reduction expected from the PTR program into  
22 the PJM base auction beginning with the May 2013 auction

1 for the 2016 2017 delivery year, correct?

2 A. That is the next base auction that we can  
3 participate in.

4 Q. You're going to participate in that, correct, if  
5 the PTR program is approved by the commission?

6 A. That is the plan.

7 Q. How will ComEd determine the amount of expected  
8 load reduction from the PTR program to be bid into the  
9 May 2013 auction?

10 A. We are currently in the process of analyzing all  
11 of the factors that are likely to impact on how much  
12 load reduction we'll get from participants, how many  
13 people will enroll in the program, and anything else  
14 that would impact that amount and we'll gather, the  
15 amount that we will bid into that auction by that  
16 auction.

17 Q. So you don't have that figured out yet?

18 A. We don't have it fully figured out yet.

19 Q. Let me refer you to the cost benefit analysis of  
20 providing direct load control devices to PTR  
21 participants. This was attached as attachment C to  
22 ComEd's petition in this proceeding and this was

1 prepared by you or under your supervision, correct?

2 A. Yes.

3 Q. I'd like to -- I'll refer you to Page 14, 292 to  
4 293 of your testimony, your direct. You testified that  
5 whether adding DLC technology creates positive or  
6 negative incremental net benefits depends heavily of the  
7 assumed level of average load reduction, correct?

8 A. What line was that?

9 Q. 292 to 293, page 13 of 14. I'm sorry, it's the  
10 bottom of 13 and the top of 14.

11 A. Yes. In our analysis of DLC technology, that the  
12 assumption around whether you get .9 kilowatts per  
13 participant or .45 kilowatts per participant is in the  
14 scenarios. We ran the driving factor of whether or not  
15 the program over the 20-year life that we examined it  
16 would be net benefits, positive or negative.

17 Q. I show you what's been previously admitted as  
18 Comverge cross Exhibit 1. This is the ComEd response to  
19 ICC staff data request DAV 2.02, correct?

20 A. Correct.

21 Q. Isn't it true that this exhibit states that .992  
22 KW of load reduction per participant in ComEd's

1 air-conditioning cycling program was bid in to PJM for  
2 PJM's 2012 slash 2013 delivery year?

3 A. For the AC cycling program we are relying on an  
4 older study that has the amount of load per participant  
5 at this level. The AC cycling program is only available  
6 to single-family homes with central air-conditioning and  
7 has historically been targeted at larger customers. So  
8 these customers that have these AC cycling units would  
9 be considerably larger than the average customer.

10 Q. Are you saying that the -- what are the  
11 eligibility requirements for the AC cycling program?

12 A. Any single-family home with a central  
13 air-conditioner can sign up for a residential or rider  
14 AC, our air-conditioning cycling program.

15 Q. And the size of the air-conditioner doesn't  
16 matter, correct?

17 A. It does not.

18 Q. The size of the house doesn't matter, correct?

19 A. Not to participating. But we're running into  
20 larger customers because if you get -- you put a direct  
21 load to a larger unit, you get a bigger load drop for  
22 the same dollar amount investment. More cost effective

1 to do it to bigger houses.

2 Q. This PTR program could be promoted similarly,  
3 correct, if it was chosen to be promoted similarly,  
4 correct?

5 A. It could be and if we did that, then, the results  
6 on the .9 side of our analysis might be applicable. But  
7 if we promoted it equally across all of the residential  
8 customers, the results might very well be towards the  
9 lower range that I submitted at the 4.5 kilowatt per --

10 Q. Now this .9 times two KW load reduction, isn't it  
11 true that this amount is greater than 40 percent of the  
12 average peak demand of ComEd's residential customers of  
13 2.25 KW which you produced in response to staff data  
14 request 2.01?

15 A. That's apples and oranges. The 2.25 is the  
16 average of all customers. The AC cycling program is  
17 only available to single family which are considerably  
18 large.

19 Q. Right. But the impact, the relevant impact of  
20 the percentage reduction is relevant based on the  
21 average system peak, if you're reducing by over .9 for  
22 any customer, the average -- the reduction on the -- the

1 average system residential peak is 2.25, that's the  
2 appropriate numerator and denominator to use to  
3 calculate the impact of load reduction for the system,  
4 correct?

5 A. On the larger residential house the  
6 air-conditioner might get a two-kilowatt load. If I  
7 cycle that air-conditioner I'm going to get about a  
8 kilowatt of load reduction. If I go to a smaller home  
9 that has a one kilowatt air-conditioner and I cycle  
10 that, I'm going to get a .5 kilowatt load reduction.

11 Q. I understand that, Mr. Eber, but you got 72  
12 megawatts of demand resource that was bid into PJM based  
13 on this .992 KW load reduction from 72,500 participants,  
14 correct?

15 A. We do and we expect that number to go down --

16 Q. But you did, correct?

17 A. We did. But PJM is no longer accepting the  
18 analysis that we used to determine that amount. They're  
19 making us redo that analysis and it's most likely that  
20 that per participant load drop will drop substantially.

21 Q. But I'm correct, aren't I, that that 72 megawatts  
22 is the key to -- if you take that amount and you take



1 your overall average peak of 2.25 and you multiply that  
2 2.25 by all the residential customers, you're going to  
3 get over a 40-percent load reduction for that average  
4 -- for the whole system for residential customers,  
5 correct?

6 A. No. You're not -- it's not making sense.

7 Q. It's your testimony that it's not -- that you do  
8 not divide the .992, this is assuming the .992 is  
9 correct, you can debate that number, but that number  
10 should be divided by the 2.25 to get the impact,  
11 correct?

12 A. No. The 2.25 is the average of all our  
13 residential customers. It's not average load of the  
14 customers we're doing AC cycling with, that number is  
15 much larger. So if you look -- if you look at the  
16 percent load drop in our AC cycling program, it's not  
17 going to be .992 divided by 2.25. That's not the right  
18 amount.

19 Q. But that's the correct math when you determine  
20 the amount of impact on the system, the peak reductions  
21 that you calculate in your cost benefits study, that is  
22 the correct amount?

1       A. The impact on the system is .992 kilowatts.

2       Q. Correct.

3       A. It's a .992 kilowatt per customer load drop and  
4 that was what was in place for this year. It's most  
5 likely to be substantially different when we do a study  
6 that contains all of the PJM requirements in it, it's  
7 going to go down substantially.

8       Q. If it's different, it's different. But the fact  
9 is that it's the .992 divided by the 2.25, correct,  
10 that's --

11               MR. FOSCO: Asked and answered.

12               JUDGE HAYNES: Sustained. It's been asked  
13 and answered.

14               MR. GIORDANO: That's true.

15               JUDGE HAYNES: Yes.

16 BY MR. GIORDANO:

17       Q. So how would you calculate it? What would you  
18 take into the numerator and the denominator to calculate  
19 that percentage?

20       A. Well, it's calculating the per participant load  
21 drop and if I had a 2.2 kilowatt customer and I assume  
22 that maybe a little bit more than half of that load on

1 peak was air-conditioning and then that -- you know,  
2 somewhere around 1.2, 1.1 kilowatts of air-conditioning  
3 load. If I cycled that and I reduced it in half, I  
4 would end up somewhere around .5 to .6, not having my  
5 calculator handy. It's a number that is reasonable for  
6 direct load control of a 2.25 kilowatt customer. Our  
7 current customers that we do AC cycling with are much  
8 larger.

9 Q. How did you calculate the 40 percent load  
10 reduction in your cost benefit study?

11 A. The assumption of 40 percent came in the -- we  
12 started with -- there's a generally reported phenomenon  
13 among the multitude of pilot programs that have been  
14 done throughout the country, that when you do a program  
15 like this without technology and then with technology,  
16 you roughly see a doubling of the load impacts that can  
17 be achieved per participant. In the original analysis,  
18 because we weren't looking at using technology in the  
19 rebate program, we said -- we thought that from pilot  
20 programs and our pilot program, we thought that 20  
21 percent load reduction will be a reasonable aggressive  
22 per participant load drop for that type of program,

1 using the rule of thumb that says if you add equipment  
2 you basically double, that gets us to the 40 percent.  
3 When we look at the 40 percent and we look at the loads  
4 that are involved, we came up with .9 kilowatts which is  
5 an aggressive high-end number of what we might be able  
6 to achieve with this program.

7 Q. You stated that PJM is going to change -- is  
8 going to require you to change the -- to make your  
9 calculations in a way that's going to lower the .992 you  
10 believe. Is that because PJM is tightening controls on  
11 its evaluation of demand response?

12 A. That's because PJM has allowed to use a study  
13 that predated our participation in the PJM market,  
14 similar to the entity studies that Comverge does. In  
15 the way that those numbers were calculated were not  
16 exactly the same way that PJM requires them to be  
17 calculated. We use different temperatures, we use  
18 different averaging. We average over four hours instead  
19 of six hours. So it's primarily the combination of the  
20 PJM requirements on the inputs to that model and the  
21 difference in the way that they require the -- should be  
22 done to the way we have done it at PJM which is going to

1 result in the reduction per kilowatt load drop.

2 Q. What document are you referring to when you say  
3 that that's been changed?

4 A. I'm not.

5 Q. There's no document is what you're saying with  
6 respect to that?

7 A. No, not that I'm aware of.

8 MR. GIORDANO: Thank you. I have nothing  
9 further. There's one more exhibit I think we forgot to  
10 admit?

11 JUDGE HAYNES: Correct. Converge cross  
12 Exhibit 8.

13 MR. FOSCO: Your Honor, I may have received  
14 a copy that was not the right exhibit because mine  
15 doesn't look like Mr. Eber's. My copy was missing a  
16 page, your Honor.

17 No objection, your Honor.

18 JUDGE HAYNES: Converge cross Exhibit 8 is  
19 admitted into the record.

20 MR. FOSCO: Can we have a few minutes?

21 JUDGE HAYNES: You may.

22 MR. FOSCO: We have no redirect. Your

1 Honor, ComEd has no redirect.

2 JUDGE HAYNES: Thank you. Okay, what else  
3 do we need to do?

4 MR. FOSCO: We have a briefing schedule.

5 JUDGE HAYNES: Briefs are due December 20th?

6 MR. FOSCO: Your Honor, did you want us to  
7 work on a common outline or small enough issues that  
8 it's not such a --

9 JUDGE HAYNES: I don't know. I think that  
10 the issues are pretty identified, I don't think that  
11 it's absolutely necessary. But if you feel like working  
12 and come up with one, that would be lovely.

13 MR. FOSCO: Okay.

14 MR. GIORDANO: You just wanted us to present  
15 an affidavit from Mr. Young or not?

16 JUDGE HAYNES: I don't know what -- you  
17 know, is it all with Mr. Lacey? I don't know what it --  
18 I mean you did call it Young-Lacey.

19 MR. GIORDANO: Correct.

20 JUDGE HAYNES: I think Mr. Young would need  
21 something.

22 MR. GIORDANO: That's fine.

1 JUDGE HAYNES: So you'll be filing a late  
2 filed exhibit, an affidavit of Mr. Young.

3 MR. FOSCO: Can we request it can be heard  
4 and taken subject to the affidavit for Mr. Young and for  
5 IC to submit an affidavit and request permission to --

6 JUDGE HAYNES: Yes. So before we do -- so  
7 it'll be Converge exhibit 1.1 and it will be a late  
8 filed exhibit filed on eDocket soon.

9 MR. GIORDANO: Do you want us to attach the  
10 exhibits as they were revised today?

11 JUDGE HAYNES: No. I think that Exhibit 1.0  
12 is admitted subject to refiling the affidavit of Mr.  
13 Young. They don't have to refile exhibits, if that's  
14 the question, just the affidavit.

15 MR. GIORDANO: Okay. Thank you.

16 JUDGE HAYNES: Okay. I guess I'll look for  
17 a motion from ICS at some point to admit their exhibits,  
18 hopefully soon.

19 The record is marked heard and taken.  
20 Thank you.

21 (Concluded at 4:34.)

22